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# East Europe Report

POLITICAL, SOCIOLOGICAL AND MILITARY AFFAIRS

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2 December 1983

EAST EUROPE REPORT  
POLITICAL, SOCIOLOGICAL AND MILITARY AFFAIRS

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EURO-MISSILES, BALANCE IN THE BALKANS

Sofia SOFIA NEWS in Bulgarian 2 Nov 83 p 3

[Article by Maj. Gen. Nesho Neshev]

[Text] Unpardonable thoughtlessness is manifested by those statesmen in Europe who, despite the awareness of an overwhelming threat hanging over their countries, have readily and submissively accepted the NATO decision for the deployment of Euro-missiles on their territories. They either do not understand, or do not want to, that "re-armament" will make them completely dependent on the USA and turn them into genuine nuclear hostages.

What balance will be created after "rearmament" of Western Europe with medium-range nuclear missiles?

The USA and NATO now have 723 forward-based nuclear weapons (aircraft carriers and ballistic missiles from nuclear submarines), and 263 English- and French medium-range missiles and bombers in W. Europe. A total of 572 new Euro-strategic missiles are now to be installed. Most of these nuclear weapons will be able to strike targets as distant as the Ural and the Caspian Sea in the Soviet Union.

With the new Euro-strategic weapons the USA and NATO aim at attaining superiority over the USSR--one and a half times over with regard to nuclear weapon carriers, and a still higher figure in the case of nuclear warheads. The new "additional armament" of Europe sharply increases the threat to the USSR and the countries of the socialist community. Given that Euro-strategic weapons have a flight-time of only 5-6 minutes, it is no longer possible in the case of inadvertent launchings to react by making any checks or verifications. A situation like this would lead to an inevitable counter-strike and the outbreak of a world nuclear missile war with catastrophic consequences for the whole of mankind. What is more, according to some data, if yet another stage is added to Pershing-2, the missile could extend its range to as far as 8,000 km and thus become a full-fledged strategic nuclear weapon.

The "limited nuclear war" which the USA and NATO are preparing to wage in Europe with the new nuclear weapons is a bluff designed to hoodwink the peoples. The colossal force of the split atom cannot be stopped by the granite border posts of states. It could bring the oceans to a boil and melt the

Arctic ice. In such an Apocalyptic picture, despite all wishful thinking hardly any people even in the USA will survive to calculate the pure profits of a "limited war". The attainment of superiority in nuclear weapons in Europe by the USA and NATO can in turn create in them the insurmountable temptation to push the button for a first nuclear strike against the countries of the socialist community. Recent speeches of the "crusaders" in the USA leave no room for doubt on this question. Clearly the USSR and the Warsaw Treaty countries cannot look impassively on the "re-armament" in Europe and will be compelled to restore the upset balance; and with regard to the USA--to create the same level of threat. In all likelihood this will be achieved through the deployment of nuclear missiles in suitable territories and aquatories.

Additional armament in Europe will no doubt result in a new round of the arms race which will have profound economic and social consequences for many countries and will worsen the lives of hundreds of millions of people on earth.

The questions which naturally spring to mind are to what extent and how "re-armament" in Europe will influence the military strategic situation in the region of the Balkans? Will the existing balance be upset?

At the present moment, thanks to the far-sighted foreign policy both of Bulgaria and the other Balkan countries, an atmosphere of understanding and neighbourliness has been attained in this neuralgic region and opportunities exist for continued detente.

A careful appraisal however needs to take into account certain factors of influence. If the deployment of Euro-strategic nuclear weapons is added to them, the result could be the emergence of undesirable destabilisation in relations among the Balkan countries.

These factors, exerting a significant influence on the military-strategic situation in the Balkans and the surrounding areas, are: the military bases set up in Greece and Turkey, and the presence of the 6th American Fleet in the Mediterranean. Two factors closely interlinked. In Greece and Turkey the USA has military air-and-naval bases, and storage depots, in Cyprus, Great Britain too has bases. The armed forces and armaments deployed there help the establishment of US and NATO military political control in the Mediterranean region and the Middle East; in the event of a military conflict it is possible from these bases to strike vitally important targets in the Warsaw Treaty countries. The carrier based aircrafts of the 6th American Fleet together with the land-bases aviation and ballistic missiles of nuclear submarines are capable, at one single launch, to inflict more than 150 nuclear strikes to a distance exceeding 1,000 km in depth.

More concretely, the military bases of the 6th American fleet could perform the following tasks:

--act as the starting and rear-protecting areas which will ensure operations by the US or NATO armed forces in the South European military theatre;

--provide the conditions for concentrating and commanding troops with the aim of delivering strikes on the USSR and the Warsaw Treaty countries in the Balkan region;

--guarantee the safety of its supplies by sea in the Mediterranean, the Aegean and, to a certain extent, the Adriatic;

--spy constantly on the activity of the armed forces of the Warsaw Treaty countries;

--maintain a secure link between the American armed forces in the Balkans and the Mediterranean, and the strategic command of the USA and NATO.

The maintaining of US military bases on the territory of Greece and Turkey reveals some common features. Through them, gradually and methodically, in the strictest secrecy, the USA is setting up a broad network of security services. This network encompasses public life, and penetrates the sphere of the personal life of citizens in the host country. In an effort to receive fuller information, the special US services infiltrate the state apparatus, and public offices, generously paying their agents.

The presence of military bases with a special legal status leads to violating the laws of the country in which they reside, it dulls the people's sense of national sovereignty and independence and gradually conditions them to put up with a dependent position.

The deployment of new American missiles in Europe, although at quite a distance from the Balkans, cannot fail to have a negative influence and to worsen the situation on the peninsula.

The realisation of the initial stage of deployment of new nuclear weapons in Western Europe will inevitably strengthen NATO's determination to deploy new nuclear weapons in the Eastern Mediterranean region as well, and that would immediately worsen the military and political situation there. The presence of 112 Cruise winged missiles in the area of Comiso (Sicily) suggests their most likely use on targets and troops in the Balkan strategic region, and that will doubtless make the situation deteriorate.

Planning the use of the new nuclear weapons on targets in the USSR and the Warsaw Treaty countries presupposes gathering intelligence about them, this will lead to the installation of new spying devices and systems in Turkey and Greece. Signs of this have already appeared with the recent installation of an AWACS system in the area of Konya in Turkey. This can only exacerbate relations among the Balkan countries. Another important fact is that any shift in European nuclear missile strength in favour of the USA and NATO will call forth respective measures on the part of the USSR and the countries of the socialist community so that the balance in forces and weapons be restored. Directly or indirectly, this will concern the Balkan and Mediterranean regions together with all complications of the situation stemming from this.



It is clear that the shadow of Euro-strategic nuclear weapons falls in different ways also on the region of the Balkans and will not only darken relations between the countries in this region, but could also lead to a dangerous confrontation of the forces. This would hardly serve the interest of the peoples.

This is why, when these days the women of Cyprus and Greece set out on a peace march against the deployment of missiles in Europe, they clearly or intuitively foresaw that the presence of Euro-strategic missiles and the concept of a "limited nuclear war" in Europe could tomorrow burn and devastate their native places and homes too.

CSO: 2020/28

## INTERNATIONAL AFFAIRS

### BRIEFS

CSSR-ROMANIAN CULTURAL COMMISSION--The Czechoslovak-Romanian Government Commission for Cultural Cooperation conferred in Prague from 24 to 26 October. The final protocol of the session was signed by Roman Narozny, CSSR deputy minister of foreign affairs, and George Ciucu, deputy minister of education and instruction of the Socialist Republic of Romania. [Excerpt] [Prague RUDE PRAVO in Czech 27 Oct 83 p 2 AU]

TV NEWS IN HUNGARIAN--Yesterday at 1830 hours [1730 GMT], the main editorial office of Slovak Television's TV News began a regular weekly broadcast of "Review of Events in Hungarian," a 30-minute news program. Czechoslovak Television thus contributes to implementing in our state the Leninist principles of nationality policy. [Text] [Prague ZEMEDELSKE NOVINY in Czech 1 Nov 83 p 4 AU]

BIRTHDAY LETTER TO SOLOMENTSEV--Gustav Husak, general secretary of the CPCZ Central Committee and president of the republic, has sent a congratulatory letter to Mikhail Solomentsev, alternate member of the CPSU Central Committee Politburo and chairman of the CPSU Central Committee Party Control Committee, on his 70th birthday. He paid tribute to his life-long responsible work and his personal contribution to the development of the relations of friendship and Czechoslovak-Soviet cooperation. He wished him good health and personal contentment in the years ahead, and new successes in the work to realize the conclusions of the 26th CPSU Congress. [Text] [LD062155 Prague Domestic Service in Czech 1730 GMT 6 Nov 83]

BATTLE OF KIEV ANNIVERSARY--Army-wide celebrations of the 40th anniversary of the battle of Kiev in which Czechoslovak units took part side by side the Soviet Army, culminated today with a festive rally in the Kiew, Dukla and Ostrava group of Czechoslovak-Soviet Friendship. Colonel General Blahnik, first deputy minister of national defense, chief of the general staff of the Czechoslovak People's Army, in his speech spoke about the decisive merit of the heroic Soviet Army in the defeat of German fascism. In the part devoted to the situation in the world he emphasized that as long as imperialism continues in its current aggressive course the basic duty of the members of our army will be to continue to improve their combat and mobilization readiness. Ladislav Sadovsky, head of a department of the CPSL Central Committee stressed in his greeting speech that we have enough strength and means not only to defend the revolutionary achievements of the Great October

in our conditions but to strengthen them too. [Text] [LD082330 Prague Domestic Service in Czech 1530 GMT 8 Nov 83]

SOVIET FRIENDSHIP GROUP LEAVES--A delegation of the all-union leadership of the Soviet-Czechoslovak Friendship Society led by secretary of the Voronezh Obkom Vyacheslav Zarubin, left Prague for Moscow this evening. The delegation took part in Czechoslovakia in the celebrations of the 66th anniversary of the Great October Socialist Revolution and the opening of the Month of Czechoslovak-Soviet Friendship. [Text] [LD090629 Prague Domestic Service in Czech 2030 GMT 8 Nov 83 LD]

CHURCHES BACK MISSILE ACCORD--Bratislava, 8 Nov (CTK)--More than 50 prominent representatives of churches, religious societies, and Christian peace organizations in the CSSR, who met in Bratislava on Tuesday, expressed their deep concern over the new situation that has arisen in the world as a consequence of the irresponsible military-political strategy of the United States. Its endeavor to deploy at any price first-strike missiles in Western Europe and the cynical assault on free Grenada are telling demonstrations of this. These dangerous steps are aimed not only at upsetting parity but also at directly jeopardizing the existence of many nations, which could lead to a global nuclear catastrophe. This menace, which is without precedent in history, must be resisted. That is why church officials in the CSSR express their full understanding for the recent agreement between the CSSR Government and the USSR Council of Ministers, the purpose of which is not only to defend the security of our nations but also to contribute to renewing constructive talks and thus to preserving peace. The church representatives appealed to the clergy and believers of their churches to give their full support to this endeavor and to contribute by intensifying their peaceful work to preserving life on Earth. [Text] [AU101243 Prague RUDE PRAVO in Czech 9 Nov 83 p 2]

HOFFMANN MEETS MONGOLIAN AMBASSADOR--Karel Hoffmann, member of the CPCZ Central Committee Presidium and chairman of the Central Trade Union Council, today had talks with Oldziyn Dorj, the Mongolian ambassador to Czechoslovakia. They discussed topical international issues, informed one another about the activity of Mongolian and Czechoslovak trade unions, and discussed the opportunities for further expanding cooperation between both trade union central bodies. [Text] [Prague Domestic Service in Czech and Slovak 1600 GMT 11 Nov 83 LD]

CSO: 2400/73

## RECOMMENDATIONS FOR PROPER MAINTENANCE OF WEAPONS, EQUIPMENT

### Field Training for Repair Personnel

Sofia VOENNA TEKHNKA in Bulgarian No 9, 1983 pp 31-32

[Article by Engr Col Kostadin Barakov: "Training of Repairmen for Work Under Field Conditions"]

[Text] The prompt repairing of damaged weapons and equipment under field conditions is an exceptionally important factor for maintaining the combat activity of the combat troops, as the repair of nonworking vehicles and their return to service will be the basic source for resupplying the units and formations with working-order weapons, combat and auxiliary equipment. For this reason the training of the personnel from the repair units to work under field conditions is an important task for the commanders and technical services.

Previous experience has shown that there are many technical services and commanders of the repair-reconstruction units and subunits which correctly understand the importance of this question. Positive experience has been acquired in this area by the units where Officers Dimitrov, Ivanov and Milenov serve. They have made an effort to correctly organize and conduct training assemblies with the repairmen and as a result of this high results have been achieved.

The training assembly with a special tactical exercise is a comprehensive measure and includes several stages: preparatory or preparations; the leading of the repair subunit to the field area and the conducting of exercises in all-arms, special and special-tactical training, the conducting of a special tactical exercise involving practice in the salvaging and repairing of nonworking weapons and equipment; concluding stage.

Officer Dimitrov pays great attention to the preliminary preparations for the training assembly because it largely determines the end results, that is, the benefit and quality of the conducted exercise. During this stage, under the leadership of the deputy commander for technical affairs (of the unit) and the commanders of the repair subunits, all the documents are worked out on planning, preparing and conducting the exercise against the background of a certain tactical and technical situation. The preparatory plan gives the times and scope of preparing the available equipment, complete logistical support, the presence and condition of nonstandard and technical equipment and the supplying of the work areas with production and other work documents. The plan for

conducting the training assembly includes the goals, the time, the length and content of the individual stages of the training assembly and special tactical exercise, the areas and subjects for the combat development of the subunit. The main and alternate areas are determined for deploying the damaged vehicle assembly point (SPPM).

Officer Ivanov gives great attention to training the officers and sergeants assigned as exercise leaders. Instructor procedural exercises are organized and here they determine the goals and procedure for conducting the special and special-tactical exercises with the personnel, in paying particular attention to the methods and procedures for repairing the equipment. Actual demonstration exercises are held for assembling and disassembling the mobile repair equipment and its use. Also worked on are the methods for building shelters and camouflaging the materiel in the terrain as well as decontamination processes for radioactive and toxic substances. All the equipment which is to be used in the field exercises is carefully prepared. The technical condition of the mobile repair facilities is checked as well as the working equipment, the pulled and other equipment, the loading and fastening of the equipment and types of property, the tables, descriptions and other devices for designating the elements of the SPPM. The stock of the ABTI [armored equipment] is brought up to full strength. The amount of repair work is determined calculating a maximum load on the personnel engaged in repairing the weapons and equipment under field conditions. The type and scope of the repairs are set for each piece of equipment to be repaired. The tactical and technical situation is plotted on a map.

During the preparatory period a detailed plan is worked out for party political work during the exercise and a socialist competition is organized between the subunits. A plan is prepared with problems for research.

The training of the repairmen under field conditions is carried out both during tactical exercises together with the troops as well as independently in a training assembly with special tactical exercise. In the first instance the repair troops participate in a tactical exercise and carry out the tasks indicated in the technical support plan.

The training assembly and the special tactical exercise of a repair subunit are organized and conducted under the leadership of the unit deputy commander for technical affairs. The exercises for all-arms and special training of the personnel are conducted on a certain subject in the field in areas designated ahead of time for the purpose. In the special training exercises they study the equipment and tools of the mobile repair facilities, the readying of equipment for use and the rules of its use, the particular features of repairing certain types of weapons and equipment under field conditions and the setting up and equipping of the work areas.

The most important stage in the training of repair troops under field conditions is the conducting of the special tactical exercise. This starts by taking the repair subunit to a certain area, the deploying of the SPPM and the organizing of its security and defense. The damaged equipment is recovered and is repaired. A group is assigned to reconnoiter the routes and the areas for the SPPM and reconnaissance is carried out. Maximum use is made of the terrain conditions for protecting the subunits and trenches and shelters are made for the

personnel and equipment. The choice of the work areas depends upon the designated production sequence of the repairs, upon the capacity of the electrical network for powering the working equipment and the lighting and upon the conditions which the terrain provides for protecting the personnel in the event of enemy attack.

The equipment and weapons are repaired in accord with the general schedule plan for repairs and the assignment plan of the repair subunits which are handed out at the start of each workday.

The socialist competition between the squads, platoons and companies is figured out daily.

Supervising the quality of the repairs performed is an important obligation for the subunit commanders. After the repair of each piece of equipment, a test run is made according to the technical conditions. Repairs are carried out both during the day and at night over the shortest possible time due to the high maneuverability of the troops and the conditions created with the use of weapons of mass destruction by the enemy.

In the special tactical exercise, the personnel trains in rapidly deploying and assembling the individual elements of the SPPM.

After returning to permanent quarters, the leader of the training assembly and the special tactical exercise conducts an analysis of fulfilling the planned measures, he points out the positive aspects and committed shortcomings by the personnel and outlines the ways and times for improving the organization and execution of repair training under field conditions.

With the constant improvement in the special and special-tactical training of the repair troops, the combat readiness of the repair subunits rises to an even higher level and this is the guarantee for the prompt and high quality repair of weapons and equipment in the course of combat actions.

#### Practical Tips on Better Repair Work

Sofia VOENNA TEKHNICA in Bulgarian No 9, 1983 pp 32-33

[Article by Col Engr Pavel Guevski: "Resourcefulness in Repairing Equipment"]

[Text] In getting ready to repair something, the first and most important "tool" which you must "have on hand" is resourcefulness. If you do not have it, it is difficult to eliminate damage arising in equipment. If you have it there is little probability that the equipment will not be repaired.

Hence you have "stocked up" on resourcefulness and start to work. A general guide for the repairing of each assembly, unit or piece cannot be given, but important and general to all instances is the relationship between man and the equipment and this is more complex the more complex the piece of equipment. During the repair, things arise such as a bad weld, a stuck bolt and so forth which so dampen your enthusiasm and so dishearten you that you want to drop everything. These things are sometimes called "pitfalls for resourcefulness."

When you are first performing any seasonal repair work, possibly you will have the greatest problems with the obstacles involving the procedure for the disassembly and particularly subsequent reassembly. Ordinarily they appear when you are thinking that you are already near the end. After a whole day of work you have finally reassembled a reduction unit and wait a minute, there is a washer which raises the basic gear. How could you have forgotten it?! Now everything must be redone. How much time have you wasted!

There are two ways to prevent the obstacles caused by confusing the assembly procedure. The first of them is to use a notebook in which you write out the procedure for the disassembly and note all the particular features which could cause problems in reassembly. This notebook will get dirty while you work, but one or two words written out in disassembly can save you hours of work. The notes should direct your attention particularly to guides such as "left" and "right," "up" and "down" in positioning the parts as well as to the place and color of the wires which connect the individual assemblies. If certain parts (important or secondary) look worn out, scorched or cracked, now is the time to note this in order to order new ones or repair the old ones.

The second way to avoid the "pitfalls" caused by the confusing of the reassembly sequence is to lay out sheets of paper (wrapping paper or simply a newspaper) on the bench or even on the floor for heavier parts on which you place the parts in a certain sequence. In this way, when you put back the bolts, nuts, washers and so forth which can easily be overlooked or forgotten, they are right in front of you and you will not forget them.

In spite of the designated preventive measures, mistakes sometimes still occur in the assembly procedure and if this happens you must draw on your stock of resourcefulness. Do not give way to despair where with your last forces you make an effort to recover the lost time. This gives rise to new mistakes. If you see that everything must be taken apart and started over, then clearly it is time for a rest.

In second place are the obstacles caused by frequently appearing and disappearing damage. Here the malfunction sometimes disappears precisely at the moment when you are about to eliminate it. It is a good thing to wait a little time and let the unit or device work so that you do not make the wrong decision. These failures are disheartening when they begin to repeat over and over. In such instances try to connect the reason with other parts of the unit or assembly. For example, if the pulse disappears after 2 hours of work at a higher temperature or by tapping the unit's base, such a connection will lead you to cause and effect hypotheses. With these concealed failures, facts will have to be recorded for a long time, but regardless of how tedious this is, it will be compensated for by the satisfaction in discovering the malfunction.

In third place are the obstacles related to the location of the parts. Sometimes the spare parts are delivered by people who have never been involved in repairs. Either they plan things which are not worn out and damaged or they supply parts which are for another model. It also happens that when you request a certain set of parts you are answered that they are no longer produced. Another time a part is delivered which has not been ordered by you. It turns out that someone has written down the part number wrong or you in a desire to

eliminate the damage more quickly have given it wrong. When it is impossible to find a spare part, it is best to repair the old one or make a new one or in an extreme instance to replace it with some similar part of close size and parameters from another model of the article. All of this involves a loss of time but you will remain truly satisfied when you see that the unit of machine begins working and "comes alive" by your ability and skill.

In addition to the enumerated external factors which are the most frequently encountered "pitfalls for resourcefulness," there are other internal ones which depend upon the repairman himself. We can divide them into three groups: the blocking of emotional perception, of cognitive ability and psychomotor behavior. The most widespread of the first group is rigidity, that is, the inability to assess what is seen due to a blind following of an old concept. For example, a given machine or unit does not work. The facts are present but you do not note them. This frequently occurs in premature diagnoses, when you are already convinced that you know where the damage is and suddenly turns out that it is not there. In this instance other indicating signs must be found, but before finding them, free your mind of old concepts. Otherwise you may not find the correct answer and will not discover the failure even when it is "right under your nose," for you are unable to see the new facts.

If you are caught in the "pitfall" of rigidity, restudy the thing in order to grasp whether that which you consider to be important is truly so. Observe closely and after not a long time, you can rest assured, you will come across what is seemingly a minute fact. Perhaps this is not a fact which interests you but you must first make certain before abandoning it. Very often you will discover that around it are also others. Precisely among them may be the fact which you are searching for.

Another internal "pitfall" for resourcefulness lies in self-conceit. If you have an unrealistically high opinion of yourself, your ability to discover new facts is weakened and your "ego" divorces you from reality. Truly good technicians are humble and quiet people, attentive, at times skeptical but not conceited.

Diffidence is the opposite of self-conceit. So unconfident are you that you are afraid to do anything whatsoever. Or at times you do things which do not need correcting, you look for some imaginary filings, the most improbable conclusions come to mind and you make a heap of mistakes because of your own lack of confidence. These mistakes further confirm your initial self-underestimation. This leads to new mistakes, to an even lower self-regard and so forth. The best way to escape from this vicious circle is to take to the proper books. Read everything which has been written on the given question! The more you read, the calmer you will be and the more confidence you will gain so that you can handle the job.

Distraction is another "pitfall of resourcefulness." This means that you do not perceive things with a fresh head, your stock of resourcefulness is small and needs replenishing. When you are bored, stop work, say to yourself "enough for now," and go to another job! If this does not help it means that you have more profound qualitative problems which distract you from your immediate task.



You must switch your attention to these problems, you must understand and study them and then come back to repairs.

Impatience is close to distraction and is always caused by the same factor, an underestimation of the amount of time which is needed for the job. In essence we never know when this may happen and there are very few repairs which can be performed in as much time as we plan for them. Impatience can best be dealt with in not precisely determining the time for the job particularly for new tasks requiring unfamiliar actions or by limiting the amount of work which you want to complete.

And now for the "pitfalls" caused by "yes-no" logic. Virtually all human knowledge is erected on the basis of this elementary binary delimitation. For example, computer memories store all data in the form of binary information as ones and zeros. Ordinarily we do not notice that there is a third possible logical answer along with yes and no. We can turn to this when the question is such that both a positive and a negative answer would be wrong and must not be given. The third answer of ambiguity is suitable when the content of the question does not exhaust the entire essence of the answer. This ambiguity exists in nature, it has been studied by science, only we do not always notice it. For example, it is constantly repeated that a multivibrator has two states, a "one" voltage and a "zero" voltage but try to read the voltage when the power is shut off. Then the circuits of the multivibrator are in a state of ambiguity which makes no sense from the viewpoint of ones and zeros. Frequently in practice in an experiment from which we expect a yes or no answer, we obtain an ambiguous answer. In this instance we ordinarily assume that the experiment has been ill-conceived and we try not to consider the wasted time. In actuality an ambiguous answer is very important. It informs us that the content of the question is very limited for the answer and that this content must be broadened. In looking for failures in equipment, when the answer to a given experiment is ambiguous, this means that you have not done what is necessary for this particular instance. Restudy the question and broaden its content (experiment).

Now about the third type of "pitfalls," the psychomotor ones. Here unsuitable tools create the greatest problems. Nothing is as demoralizing as difficulties caused by tools. If you work with good instruments and meters which do not fail you, there will not be failures at the most inopportune moment.

Aside from tools, the situation is of great importance. Pay attention to suitable lighting! How many mistakes could be prevented with a little additional light. Some physical inconveniences are unavoidable and their influence must be considered. For example, if you are cold, you will be in a hurry and can make mistakes and if you are hot you will be more irritable. Avoid working in an uncomfortable position for the body, when this is possible.

There is also the psychomotor "pitfall" of muscular insensitivity which leads to unpleasantness. This is a result both of a failure to consider one's own strength as well as a miscomprehension that even though externally a machine is tough, inside it are delicate and precision parts which can easily be damaged. There exists a so-called technical touch which is very clear for someone who possesses it and very difficult to explain to someone who does not know what it is. It comes from a profound inner perception of the elasticity of materials.

Some materials, such as ceramics, have very low elasticity and when you are screwing a porcelain thread, be careful not to use too much force!

Other materials such as iron have significant elasticity. With nuts and bolts we can use great mechanical force but we must know within what limits the metals are elastic. When we tighten a nut, there is a position of "hand tightened" where none of the elasticity is lost. After this comes the condition of "tightened" whereby a portion of the surface elasticity is lost. We can reach the final limit of tightness. Now all elasticity has gone. The effort required to achieve each of the three states differs for each size of nut or bolt as well as for the individual materials, but a person with a technical touch understands when it is tight enough and stops. The person deprived of such a touch continues to tighten and strips the thread or damages the joint.

A mechanical touch presupposes a feeling not only for the elasticity but also the hardness of metals. Machines and assemblies consist of parts made with very great precision and if you bend, scratch, dirty or hit with a hammer, they will lose this precision. Metal under the surface usually can stand strong blows and great pressure, but the surface itself cannot. When you repair parts which are stuck or are inconvenient for work, if you have a mechanical touch you will avoid damaging the smooth surfaces. If you must work on the surfaces themselves, always choose tools made of softer material such as bronze, wood, rubber, lead and plastic hammers and put copper, lead or plastic plates in the jaws of the vise! If you have this failing of dropping things, concentrate more.

Generally instill in yourself greater respect for precision equipment which you are handling. It will thank you.

#### Requirements for Weapons Maintenance

Sofia VOENNA TEKHNICA in Bulgarian No 9, 1983 pp 34-35

[Article by Engr Lt Col Stefan Mladenov: "Requirements on Preparing Small Arms and Ammunition for Firing"]

[Text] The characteristic features of troop actions under the various conditions of conducting combat such as dispersion, action along a broad front and to a great depth, the high rate of advance, the limited time for preparation and others make it extremely essential that each soldier, crew and team be capable, under the leadership of their immediate commanders, to carry out full preparations of the weapons and ammunition for firing in accord with the specific conditions.

In order to achieve maximum dependability and high effectiveness of the firing of small arms, it is essential to observe a number of requirements which can be classified in the following manner:

- 1) Requirements which must be performed to maintain the weapons in constant technical good order;

## 2) Requirements on the immediate preparations of the weapons for firing.

The two groups of requirements are organically linked into a two-way dependence. This is so because a technically malfunctioning and noncombat-ready weapon cannot be successfully readied directly before firing and, on the other hand, a correctly working weapon which has not been prepared for use under the forthcoming specific conditions can also cause serious delays and have low fire effectiveness.

Experience unambiguously shows that where they fully and effectively carry out the planned measures such as inspections, technical servicing, the testing of the weapons for combat, the readying for normal combat and so forth, the results of field firing are good.

The requirements which must be carried out to maintain the weapons in constant technical working order are: the personnel must firmly know the design of the weapons and their operating rules; the operating instructions must be precisely carried out; the periodicity of the inspections must be strictly observed, the maintenance must be effectively carried out and the detected malfunctions promptly eliminated; the weapons must be kept fully assembled as well as promptly and fully supplied with spare parts and operating materials; the superiors of all levels who are responsible for the operation and combat readiness of the weapons are to exercise systematic supervision over their condition; prompt and effective repairs are to be carried out by the repair bodies and services on the weapons requiring this.

The direct preparation of automatic small arms for firing includes:

Incomplete disassembly (with all parts and the barrel channel cleaned); inspecting the parts and mechanisms for cracks, dents, bending and other malfunctions as well as removing the cuts ["izronvane na rezbi"] and widening the chamber of rifles; cleaning and checking the blade, the clips, belts, cartridge boxes, boxes and spare barrels; checking the presence and proper working order of the accessories and covers; inspecting the conformity of the part number to the basic number of the weapon; cleaning, oiling with a thin layer of lubricant and assembly of moving parts; testing the action of the assembled mechanisms and latches.

Depending upon the number of given firings, the wear on the parts and mechanisms and the temperature at which the firing is to be made, the most appropriate opening of the gas regulator should be set on each machine gun. In addition, under conditions which differ sharply from the regular (very high or very low temperatures, dustiness and so forth), there are additional requirements on preparing the weapon to fire. For example, if an automatic or a machine gun has been for a long time in the cold, before loading its moving parts should be moved energetically several times back and forth by hand. With heavy dustiness it is essential to fully degrease the sights, the barrel channel and moving parts. The presence of oil creates prerequisites for the rapid settling of dust and disrupting the normal operation of the parts and mechanisms. Ensuring high intensity of firing with very hot weather requires that the spare machine gun barrels be well prepared in order to replace them after a certain number of rounds without disrupting firing conditions.

What are the consequences of the failure to observe some of the designated requirements?

x Sr Sgt Dimov, a master repairman, stated that in many instances the poor cleaning of the barrel channel created conditions for the falling of foreign objects into it such as lint, dirt, sand and so forth. If in traveling through the bore a bullet encounters a foreign object, it is slowed down and the space behind the bullet increases more slowly than with a normal round. This creates conditions for a sharp rise in pressure above the acceptable and to the bulging or bursting of the barrel. The senior sergeant also said that with incorrect clearing of the barrel, without using a muzzle guard or in cleaning from the breech without a case put in the chamber with a hole punched in its bottom, the edges and grooves are more rapidly worn down and the chrome surface is worn off. All of this leads to a further change in the muzzle velocity and the stability of the bullet as well as to a disrupting of the gun's grouping.

Officer Iliev, in turn, stated that incomplete and poor preparation for firing and extended operation of automatics and machine guns are the causes of increased clearance between the breech and the barrel. An increased play above acceptable limits is the prerequisite for a so-called cross-rupture of the cartridge and blockages in firing. In order to prevent the rupturing of the cartridge, Officer Iliev always requires a check on the size of the play, that the chamber be kept clean and that dirty cartridges not be used for firing.

For promptly discovering the wear on barrels in the unit where Officer Iliev serves, accurate accounting is kept on the number of rounds fired from the machine guns and conclusions are drawn on the condition of the barrels from what is the amount of bullet scatter in testing the firing of the weapon.

One of the important conditions which determines the combat readiness of small arms is the prompt and high quality testing for combat and bringing it up to normal combat conditions. Great attention is given to this question in the unit where Officer Kosev serves. The underestimating of this activity in certain units leads to unsatisfactory results from field firing and causes uncertainty among the personnel as to the real capability of the weapons.

The maintaining of a fixed position of the gun sights after bringing them to normal conditions is one of the essential tasks of commanders of all rank.

A correct setting of the position of the gas regulator plays a very important role in the normal work of the mobile machine gun units. For example, on the new 7.62-mm PK machine gun, for up to 2,000 rounds, the gas regulator is put in the second position to ensure greater gas release to the piston and hence greater energy for moving the moving parts in firing back, as well as for providing easier breaking in of the new parts. After 2,000 rounds, the regulator must be put in the first position. The gas regulator is put in the third position with extremely heavy firing conditions: very low temperatures, very dirty parts of the machine gun and so forth.

Experience of many field firings shows that the proper working order of the cartridge clips and belts and the correct insertion of the cartridges in the belts are of great importance for preventing misfires. The boxes for the

cartridge belts and clips should not have dents. The movable cover for the belts must cover the opening for the spring-driven moving of the belt. The boxes and clips must be connected to the weapon without particular force and held strongly by the latch. The cogs of the machine gun belt should not have bends, holes, cracks, and tears while the connecting springs must be strong and hold the cogs.

One of the most essential factors which to a great degree determines the reliability of the weapon and the effectiveness of firing is the ammunition.

Tests run in certain units indicate that deviations from the rules for storing cartridges in combat vehicles under field conditions lead to significant changes in their quality and in many instances to complete unsuitability for combat use.

Cartridges must be protected from moisture, dust and dirt. Wet cartridges can become unusable for firing. They must not be allowed to fall in any fluids whatsoever, including oil, since the fluid, in penetrating the casing, wets the charge. This can lead to misfires and delayed firing.

The excellent firing of small arms in the subunits where Capt Ivanov and Sr Lt Yovchev serve confirm the necessity of covered storage for both factory-packaged and loose cartridges.

Cartridges in air-tight packaging should be unwrapped directly before their use.

In inspecting the cartridges before firing, it is particularly important to check whether the casings have any rust or wet areas and whether the bullets turn (rattle) in the cartridge top, whether there are green areas or cracks in the primer, and whether the primer protrudes over the bottom of the casing.

Cartridges with rust spots should be wiped with a dry cloth. Cartridges which have been loose for a long time before being loaded in the clips must be wiped. Bad cartridges must not be used for firing.

In conclusion we must point out that the strict observance of the requirements for preparing small arms and ammunition for firing is an objective prerequisite for achieving high success in the combat training of the subunits.

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## DIFFICULTIES IN AIRCRAFT MAINTENANCE OUTLINED

Sofia VOENNA TEKHNKA in Bulgarian No 9, 1983 pp 28-30

[Article by Engr Col Zhel'o Zhelev: "On Certain Difficulties of Engineer and Technical Activities in Aviation"]

[Text] Engineer and technical activities in air units are very specific in terms of goals, tasks and the conditions under which they occur and in terms of the difficulties which accompany them. In addition, they have their own psychological patterns and their own definite inner structure. As complex and crucial activities, they are expressed in the maintaining of aviation equipment in constant working order and in ensuring flight safety under various conditions and in any situation. They are characterized by great dynamism, tension and difficulties. As a complex system with a complex structure and specific military relationships, these activities require scientific research also from the viewpoint of the needs of indoctrinating the engineer personnel. Hence their great social importance.

Difficulties, as one of the important components in the job description of the corresponding engineer and technical specialty, have particular significance for engineer and technical activities. In order to study their significance in conducting the preliminary, preflight preparation of the aviation equipment and in its preparation for a second flight and their impact on the activities of the engineer and technical personnel, we conducted research by using a questionnaire. From the aviation specialists in the corresponding specialties participating in the research, we asked that they assess the importance of individual difficulties and in this manner we were able to rank the most important of them which have the most essential impact on the effectiveness of aviation engineer work. On the questionnaire sheet we put 13 features (difficulties) which characterize the degree of difficulty according to the conditions under which the aviation equipment is being readied (winter time and summer time, in dispersed parking, under an arched shelter, on dirt runways, in conducting tactical flight exercises); the nature of the flights for which the aviation equipment was being readied (for combat use, at a low or high altitude, on dirt runways, over the sea, under instrument meteorological conditions (IMC) and visual meteorological conditions (VMC)); the organization of work in preparing the aviation equipment; the absence of spare parts; the lack of time; insufficient experience in the engineer and technical leadership; insufficient practical experience of the executor technical personnel; a lack of information; the poor teamwork in the collective of the flight (group); the

poor teamwork in the collective of the subunit; insufficient contacts with the engineer and technical leadership; an insufficient amount of monitoring and metering equipment (KIA); an insufficient amount of tools. If the corresponding difficulty is of prime significance for the engineer and technical activities, an estimate of excellent is given and if it is of great importance then very good. An estimate of good is given to the same difficulty if it is of significance for engineer and technical activities and average if it is of little significance. The questioned aviation specialists were asked to give an estimate of little for that difficulty which was without importance for engineer and technical activities. The results of the research brought to the forefront the most significant difficulties in readying and maintaining the aviation equipment and these we expressed by a coefficient calculated by the formula:

$$k = \frac{\sum ki}{n} ,$$

where  $k$ --the coefficient of importance for the corresponding difficulty;  
 $\sum ki$ --the total of the number of points given by each participant in the research for the corresponding difficulty;  
 $n = 6A$ --the maximum possible number of points if each participant in the research gave an estimate of excellent for the corresponding difficulty;  
 $A$ --the number of participants in the research;  
 $6$ --the constant estimate of excellent.

The given research provided us with an opportunity to bring out the general structure of the most important difficulties which the engineer and technical leadership of the aviation units must bear in mind in organizing and carrying out aviation engineer support for flight operations. These are the following:

#### In Preliminary Preparation of the Aviation Equipment

Difficulties brought about by the organization of work with a coefficient of 0.89; by the nature of the flights for which the aviation equipment was being prepared (for combat use, for low and high altitudes, for dirt runways, over the sea, under VMC and IMC) with a coefficient of 0.86; from an absence of spare parts with a coefficient of 0.85; due to insufficient tools with a coefficient of 0.84; from the conditions under which the aviation equipment was being readied (winter or summer time, with dispersed parking, in an arched shelter, on dirt runways and in conducting tactical flight exercises) with a coefficient of 0.83; from a lack of monitoring and metering equipment (KIA) with a coefficient of 0.82; due to insufficient experience of the engineer and technical leadership with a coefficient of 0.815; due to insufficient practical experience on the part of the executor technical personnel with a coefficient of 0.81 and so forth.

#### In Preflight Preparation

The difficulties caused by the organization of the work with a coefficient of 0.89; by the nature of the flights for which the aviation equipment was being prepared with a coefficient of 0.86; by the conditions under which the aviation

equipment was being prepared (winter or summer time, dispersed parking, in an arched shelter, on dirt runways, in conducting tactical flight exercises) with a coefficient of 0.83; by a lack of spare parts with a coefficient of 0.825; by insufficient practical experience on the part of executor technical personnel with a coefficient of 0.82; because of insufficient tools with a coefficient of 0.81; due to a lack of information with a coefficient of 0.805; due to insufficient monitoring and metering instruments (KIA) with a coefficient of 0.80 and so forth.

#### In Preparations for a Repeat Flight

The difficulties caused by the organization of work with a coefficient of 0.875; by the nature of the flights with a coefficient of 0.86; by the conditions under which the aviation equipment was being prepared (winter or summer time, dispersed parking, in an arched shelter, on dirt runways and in conducting tactical flight exercises) with a coefficient of 0.850; by the lack of spare parts with a coefficient of 0.821; by insufficient practical experience on the part of the executor technical personnel with a coefficient of 0.820; by the insufficient experience of the engineer and technical leadership with a coefficient of 0.815; due to insufficient tools with a coefficient of 0.809; due to the lack of information with a coefficient of 0.800; due to insufficient metering and monitoring equipment (KIA) with a coefficient of 0.790 and so forth.

From the research it can be seen that most significant are the difficulties related to the organization of the work, in carrying out preliminary and pre-flight preparations (a coefficient of 0.89) and preparations for a repeat flight (a coefficient of 0.875). Hence the necessity to improve this organization in the activities of the engineer and technical personnel as a whole. This necessity stems chiefly from the decisive influence which the organization of the work has on the results of the entire system of aviation engineer support in aviation units.

The next important difficulty which very substantially influences the effectiveness of engineer and technical activities are those engendered by the nature of the flights for which the aviation equipment is being prepared (with a coefficient of 0.86). The results of the research bring to the forefront the most important of them in preliminary, preflight and repeat flight preparations of the aviation equipment, as is seen in Table 1.

In order to fulfill the tasks in the flights, the aviation equipment must operate reliably. This requires that the aircraft be prepared with particular precision. For example, in preparing the aircraft for low altitude flights, the correct operation of the aircraft fuel system, the emptying of the tanks and the corresponding cockpit signal system must be tested with particular care.

Flights from ground runways are characterized by the appearance of more malfunctions in the systems, landing equipment, the damaging of blades and so forth the cause of which is the greater loads on the wheels, the vibration of the aircraft, dust, mud and solid particles from the ground. All of this requires in their practical activities of readying the aviation equipment for such flights that the engineer and technical leadership consider these features and related difficulties in planning, organizing and carrying out on a differentiated and very specific basis the tasks to minimize their negative impact on



Table 1

No.	Nature of Flights	Types of Preparation, Coefficient		
		Preliminary	Pre-flight	Repeat flight
1	Flights for combat employment	0.93	0.925	0.932
2	Flights over sea	0.90	0.89	0.880
3	Flights under IMC	0.88	0.87	0.895
4	Flights at low altitude	0.87	0.86	0.865
5	Flights at high altitude	0.87	0.77	0.785
6	Flights under VMC	0.75	0.76	0.790

labor effectiveness of the engineers and technicians and on the entire system of aviation engineer support.

This is essential first and foremost due to the fact that in overcoming the difficulties, the engineers and technicians are psychologically under stress and some may show a feeling of a lack of confidence in their own forces. For this reason in the range of activities carried out it is also essential to plan those which psychologically relieve the engineers and technicians, for example, strict working conditions, the alternating of intense work with rest, the material supply of everything necessary for the engineer and technical activities, constant contact of the leadership with subordinate aviation technicians, mechanics and specialists, a mobilized collective opinion and mood, the improved sociopsychic climate in the aviation engineer-technical collectives in the flights, in the groups and in the subunits and in the strengthening of good relations between the engineers and technicians.

The next important difficulties are caused by conditions under which the aviation equipment is readied for the flights (with a coefficient of 0.83). The results of our research showed their specific importance in preliminary, pre-flight and repeat flight preparations as is seen in Table 2.

The great importance given by the questioned aviation engineers, technicians and mechanics of all specialties to the difficulties engendered by the conditions under which the aviation equipment is prepared are dialectically linked to certain particular features of winter time involving the low temperatures, snow fall, strong winds, increased air humidity and sharp changes in the weather.

The same can be said of the difficulties in preparing aviation equipment for flights involving tactical flight exercises. There are as many difficulties in preparing the aviation equipment for flights from winter runways, with dispersed parking and in an arched shelter. All these difficulties as well as

Table 2

No.	Conditions Under Which Aviation Equipment is Readied for Flights	Types of Preparation, Coefficient		
		Preliminary	Pre-flight	Repeat flight
1	Winter time	0.96	0.93	0.95
2	In conducting tactical flight exercise	0.89	0.89	0.89
3	In flight from winter runways	0.83	0.84	0.84
4	With dispersed parking	0.81	0.83	0.87
5	Under arched shelter	0.76	0.76	0.78
6	Summer time	0.72	0.73	0.74

those related to the lack of spare parts, the insufficient amount of tools and monitoring-metering equipment, to the insufficient practical experience of the executor engineers and technicians as well as others to a very great degree have a negative impact on engineer and technical activities. As actually happens: the reactions of the engineer and technical personnel become longer in the work on aviation equipment; the concentration and switchability of attention are reduced; work efficiency is lowered.

All of this can lead to incorrect actions, it can create potential accidents due to the subjective factor and ultimately contribute to a reduction in the combat readiness of the aviation units. Consequently, the engineer and technical activities on aviation involving difficulties in readying the aviation equipment place very great demands on the engineer and technical personnel for working under these conditions. However, we are profoundly convinced that in practice some of these problems are underestimated by the commanders and particularly by the deputy commanders for IAS [aviation engineer service] of the aviation units and this is badly reflected in engineer and technical work.

The results of our research give us justification to draw certain practical conclusions and specific proposals.

An understanding of the specific influence of the individual difficulties in readying and maintaining the aviation equipment provides an opportunity for the commanders and the ZKPCh [Deputy Commander for Political Affairs], the deputy commanders for IAS of the aviation units and subunits as well as the party organizations and the Komsomol to eliminate their negative effect by the appropriate means.

The problems related to the difficulties of engineer and technical activities up to now have not been sufficiently studied. It is essential to begin research in this area in the aviation units as this is of very great applied practical significance for the effectiveness of aviation engineer support for flight activities in aviation.

The solving of these problems brings to the forefront the organization of the work of engineers and technicians as well as the organizational qualities of the engineer and technical leadership in aviation. At this stage not enough is being done for their indoctrination and this impedes the work.

- ✓ An understanding of the difficulties (ranked by importance) engendered the nature of the flights for which the aviation equipment is being prepared provides an opportunity for the commanders and the deputy commanders for IAS of the aviation units and subunits on a differentiated basis to plan, organize and carry out the tasks and after carrying these out to minimize their negative effect on the aviation engineer support of flight operations. In this regard it is essential to improve the quality of activities carried out for the mental relieving of engineer and technical personnel.

A knowledge of the difficulties ranked in importance and engendered by conditions under which the aviation equipment is prepared for flights provides an opportunity for the flight command and the engineer-technical leadership in aviation to plan, organize and carry out tasks to increase the dependability of the engineers and technicians in working under such conditions. For this reason it is essential to begin broader research to determine the capability of the engineer and technical personnel to carry out their functions under the above-designated conditions and, on the other hand, to raise the reliability of the aviation equipment in order to reduce failures, to constantly investigate the reasons for difficulties in engineer and technical activities, be they subjective, objective or mixed, and take practical measures to eliminate them.

The solving of these problems is of particular importance for engineer and technical practices in aviation and for increasing flight safety.

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CALL FOR CAREFUL, ECONOMIC USE OF MILITARY EQUIPMENT, SUPPLIES

Sofia VOENNA TEKHNICA in Bulgarian No 9, 1983 pp 3-4

[Article by Engr Maj Gen Dobri Dobrev: "Let Us Economically Use Resources and Materials in Operating Military Equipment"]

[Text] The economic expenditure of material and labor resources and finances is an indispensable condition for successfully increasing the economic and defense might of our nation.

x The concentration of enormous wealth in the hands of a socialist society does not exclude their rational and thrifty use even when they are in abundance because the labor of the people and society has been invested in them. In the period of building a mature socialist society, cost accounting, strict thriftiness, a reduction of losses and a reducing of costs assume ever greater pertinence. The Program of the CPSU states: "To achieve the highest results in the interest of the people and society with the least expenditures on this."

In following Lenin's legacy, the BCP has given and constantly does give attention to the questions of economy and thriftiness and to indoctrinating the people in a spirit of a careful attitude toward public wealth. These questions were clearly reflected in the decisions of the 11th and 12th Party Congresses and the subsequent plenums of the BCP Central Committee where, in the area of social policy there was to be strict economy and high efficiency in using the labor, material, financial and foreign exchange resources of the nation, a sharp rise in the intensification and intellectualization of labor with a constant increase in labor productivity and efficiency in all areas of social life.

These demands of the communist party and the people's government apply fully to the personnel of the armed forces who have been entrusted with enormously valuable materials, the most advanced equipment requiring care and consideration. The struggle to rationally utilize these valuable materials and for maintaining the weapons in constant combat readiness is a question of particular concern for the commanders, the political workers and technical services, the party and Komsomol organizations and all the personnel of the BNA [Bulgarian People's Army].

Each year in the system of the unit where Officer Dobrev serves, a detailed annual plan for economic activities is worked out and this includes specific

measures with an estimate of the expected effect from their fulfillment. Usually it is recommended that the units draw up counterplans and the positive experience should be widely exchanged and put into practice. In working out the plans, commissions of specialists are established and these seek out reserves for achieving greater economy. Savings in materiel involved in the mastery, operation, repair and safekeeping of weapons and equipment comprise a particularly broad place in these plans. A good example of such a thrifty attitude is set by the personnel in many tank, motorized rifle, artillery, signals, motor vehicle and other units. They stand out in the fact that they keep the weapons and equipment in constant working order and ready for action, with trouble-free operation and good inner order in the fleets and shops. The military equipment is mastered with a minimum expenditure of resources, in extending the life of the equipment between repairs and the operating life of storage batteries, tracks and tires, in most thriftily using fuels, lubricants, spare parts, materials and money.

Against the background of the designated examples of a careful attitude toward the weapons and equipment, unfortunately instances are also encountered of wastefulness and mismanagement, of underestimating the importance of the struggle for savings and efficiency in using the same and in expending materiel. Ordinarily for such an attitude there is an appropriate justification such as "economy need not be made for military training," "there are no necessary conditions," "there are consumption standards," "there are periods between repairs," and so forth which exclude the possibility of savings and efficiency. In proceeding from the interests of combat training and combat readiness, we will see that at this stage the effective and rational use of the military equipment and motor life is assuming important significance. The experience of many units and subunits shows that there is a real possibility of achieving high results in military training and combat readiness without overextending materiel, including motor life and ammunition. For this it is essential to prepare each exercise and each taking to the field well, to struggle to hit the target with the first round, the first burst or the first launch. Such firing accuracy can be achieved only with constant concern for the weapons, by stubborn and effective training, by the maximum use of simulators and training devices, with the upkeep and excellent technical state of the military equipment. Intelligent and well thought-out planning in the subunits will make it possible to increase the density and quality of the training process as well as the capacity of the training facilities. The commanders of the outstanding subunits, after repeated use of the trainers and the working out of actions involved in firing from a moving vehicle, only after they are fully confident of the success of their subordinates, allow them to participate in field firing.

The effective use of trainers and training equipment provides an opportunity to achieve outstanding results in combat training with a minimum expenditure of motor life and ammunition and to revise the annual operating standards for all types of combat equipment in the aim of reducing them. Here an important role is played by the quality of training of the instructors on the trainers and machines, of the lab workers and operators who operate the control panels and systems at the testing ranges, shooting ranges, tank and motor vehicle driving grounds.

It is also essential to give great attention to the good organization and preparation of each exercise, to improving the procedural skills of the officers and NCO's. A detailed discussion of a forthcoming exercise before each taking to the field by the subunit on the part of the commanders, the party and Kom-somol activists, the exchanging of positive experience contribute significantly to its effective holding, as well as to high efficiency in the use of the permitted motor life and ammunition. An important role is also played by exercises in the technical circles and the holding of technical quizzes and question and answer evenings. All of this contributes to increasing the effectiveness of the training process, the quality of the servicing and repair of equipment and weapons as well as to increasing combat readiness.

Usually in the units where material expenditures are made there are more shortcomings in combat training. There is nothing miraculous about this. These two indicators are interrelated. For example, before a driver sits before the controls, he should be well trained in the trainer classroom while a gunner must train at the range in a gunnery trainer. If this training is not well organized, shortcomings in instruction will have a negative influence both on the results of the training and on the expenditure of motor life, ammunition and fuels and lubricants.

The struggle to increase the number of class specialists and the quality of their training and skills provides significant savings of ammunition, fuels, lubricants and spare parts, and leads to the extending of the periods of time equipment can be operated between repairs, and to extending the life of tires, tracks and storage batteries.

In the struggle to save materiel, very useful work can be carried out by the people's controllers and auditors. They help the commanders and staffs in promptly discovering bottlenecks, sources of overexpenditures, unproductive losses, abuses and embezzlements.

The military inventors and rationalizers have contributed significantly to savings of state and material assets. They have worked constantly to increase the efficiency of military training, to better maintain expensive equipment, to facilitate the work of the soldiers and to save time and state funds. Many units and subunits by their own efforts are improving the training facilities, they are developing excellent operating mock-ups, stands and trainers which make it possible to train specialists, to develop in them the practical skills of operating the mechanisms and units, without causing accelerated wear and damage to individual machines and articles. But very frequently there has been parallel work due to the poor exchange of information. This has been confirmed by the exhibits of the TNTM [Movement for Youth Technical and Scientific Creativity] found at the 11th Review of Youth Creativity.

It is essential to organize a rapid exchange of information among the troops on all valuable and interesting proposals for extended introduction. Some of them with particular importance must be adopted for production and delivery by the central supply bodies.

In many troop collectives the necessary attention is paid to the rational expenditure of fuels and lubricants. But, as experience shows, there still are

significant reserves for saving these materials in the troops, and the basic ones are reducing the expenditure of fuels and lubricants in the process of operating the equipment. One of the important factors influencing the consumption of fuels and lubricants is the technical condition of the equipment being operated. Even the slightest malfunction which at first glance does not involve the consumption of fuel sometimes becomes the reason for overexpenditure. For example, with poor headlights, a driver is forced to travel at a speed less than the economic. Certain malfunctions lead to significant losses of fuel. For example, with a nonworking sparkplug on a 4-cylinder engine, gas consumption can be increased from 15 to 25 percent. A malfunction in the fuel system of a diesel engine (for example, a misadjustment of the fuel system) can increase consumption to 30-35 percent and with a mis-set ignition advance angle from 5 to 15 percent. Fuel consumption is also influenced by the air pressure in the tires. In reducing it, for example, from 3.5 to 2.5 atmospheres (in traveling at a speed of 50 km per hour), fuel consumption is increased up to 15 percent. Many examples could be given where the violating of one or another adjustment parameter entails an increase in the consumption of oil, cooling and brake fluid. The conclusion is clear. A machine must always be in proper technical order. For this reason, it is essential to observe the dates for servicing the equipment and this must be done completely and efficiently. The reserves of savings and thriftiness are inexhaustible. It would be wrong to assert that they all have been fully used. In many places these reserves have not been brought out. Instances are encountered of obvious mismanagement, as a result of which significant losses are permitted. An engine operating without any necessity in a standing vehicle, the spilling of fuel on the ground in filling the tanks, malfunctions in individual assemblies and systems of equipment, the irrational expenditure of spare parts and materials--all of this leads to excess losses and overexpenditures. At times the lights are left burning in barracks rooms, drill grounds, parking areas and workshops, the heat is turned up in rooms where the doors are not closed and the windows are not sealed. Without any particular need, electric motors are installed with a greater power than the needs of the given machine. An important reserve for savings is the seeking out of more rational ways for utilizing transport by concentrating the load capacity and making loaded trips in both directions, by reducing standing time and widely introducing mechanization for freight handling. In order to reduce the costs of transport shipments, certain services widely use the centralized delivery of goods, as in the case of the unit of Officer Ivanov. In true practice it is essential to widely employ economic standards of efficiency and create and introduce a value estimate for the operation and repair of combat and auxiliary equipment.

The areas of economic activity in the troops are diverse and it is very important that all the services and all the men, regardless of their rank and service position, participate in the campaign for a thrifty attitude toward national wealth when the entire people are working to compensate for the losses of the drought. These areas must not be viewed independently of other tasks. They are an important link in the complex chain of activities for increasing the combat readiness of the units and subunits, for improving the quality of the personnel's professional training. It is our task to thriftily and economically dispose of the funds allocated by the state for defense, to make maximum use of them for further intensifying combat training and to endeavor to precisely calculate and effectively and properly spend each lev, each kilogram of material, each motor hour and kilowatt of energy, each hour of military service.

RECOMMENDED METHODS FOR MILITARY EQUIPMENT MAINTENANCE

Engineer Equipment

Sofia VOENNA TEKHNICA in Bulgarian No 8, 1983 pp 30-31

[Article by Engr Maj Georgi Ivanov: "Engineer Equipment"]

[Text] The dependable operation of engineer equipment to a great degree depends upon the high quality execution of all the operations provided for in the machines' operating manuals for preparing them for operating under autumn and winter conditions. The readying of the engineer equipment for operating under autumn and winter conditions is one of the basic tasks of the command, the party and Komsomol organizations in the unit in which Officer Dimitrov serves. Let us share the experience of this unit.

The first question which is resolved in planning and organizing the seasonal technical maintenance (STO) by the command and technical service is the choice of the servicing method. The importance of resolving this problem is determined by the great diversity of the engineer equipment in use in the BNA [Bulgarian People's Army].

The servicing method depends upon the number of different types of machines and equipment, upon the number of maintenance personnel, upon their technical training as well as upon the conditions created in the unit for maintenance.

Experience has shown that for the engineer units and subunits the best is a combined method which employs the flow or assembly-line method (one or two flowlines are organized for servicing the basic types of machines) and the method of universal brigades for servicing the operating engineer equipment.

The practice in the unit has shown that particular attention must be paid to preliminary planning, to preparing the instruments and stands to be supplied to the work positions and specialized brigades, to material supply and considering the specific conditions under which the equipment has been during the summer season.

An important aspect in carrying out the planning is flaw detection on the machines and the drawing up of flaw lists. For carrying out flaw detection they call in specialists from the repair-reconstruction company with the highest



technical skills and years of practical experience as well as the chief of the technical inspection point. In determining the technical state of the individual assemblies and units, wide use is made of instruments and stands which are part of the technical workshop. This equipment is also used for monitoring the time of the technical servicing itself, as is required.

On the basis of the generalized data from the equipment flaw detection it is possible to draw up a sound and realistic plan for material and technical supply. On the basis of the flaw detection data, we carry out routine repairs on the engineer equipment before the maintenance.

An important condition for the full completion of the seasonal maintenance on engineer equipment is the preliminary elaboration of flow sheets for each individual type and make of engineer equipment or unit. Before commencing work, directly in the fleet we organize and carry out special exercises for the officers and after this with the sergeants and soldiers.

At the exercises for the officers, as a rule, an analysis is made of the operation of the equipment during the summer training season and during the entire year, a study is made of the directives and orders on the questions of operating and maintaining the engineer equipment, the properties of the fuels and lubricants employed in the equipment is recalled as well as the procedure for obtaining and issuing them, the basic operations of STO are studied as well as the measures which will reduce the time for taking the equipment away from the fleet.

The trouble-free operation during the winter season is also aided by the 2-day exercises for all the personnel involved in the STO. Practical exercises are conducted in such a manner that each specialized brigade and each specialist performs the operations which have been included in the flow sheets and will be performed with the seasonal maintenance. We organize these exercises for the personnel on one or two pieces of equipment and after the exercises these can be used as a standard for comparison. At the end of the exercise the personnel take a quiz. We draw up a record of the quiz results.

Not only the technical officers are involved in training the personnel but also the specialists from the repair-reconstruction company and the best trained drivers.

The vehicle-based engineer equipment is ordinarily serviced by the flow method. On the flowlines, as a rule, we organize the following specialized posts: cooling system, lubrication system, electrical equipment, feed system, monitoring-adjustment and fastening work, the running gear, transmission and controls, paint and anticorrosion surfaces, checking and filling out the ZIP [spare parts and tool kit], flaw detection and acceptance of the equipment.

In readying the equipment for operation under autumn-winter conditions, we perform the jobs for regular technical servicing which the given equipment requires as well as additional operations provided in the operating manuals and instructions for the given type of equipment.

Ordinarily we locate the specialized posts for the lubricating system, electrical equipment, the feed system, the monitoring-adjustment and fastening work, the undercarriage, the transmission and controls in the technical workshop and this provides us with an opportunity to employ the complete stationary equipment and better working conditions for the servicing personnel with bad weather. With any STO we endeavor to appoint the same persons in charge so as to ensure more effective inspection and high-quality execution of the operations set out in the flow sheets of the individual posts.

The readings of the oil pressure gauge are the basic indicator for the proper functioning of the lubricating system. In order to obtain a more accurate notion of the state of the lubricating system, it is inspected when the engine is not working and after, in operation.

With the stopped engine, the level and condition of the oil are checked in the engine crankcase or in the oil tank, the condition and fastening of the oil filters, the oil cooler and oil lines and in addition whether oil has leaked out. We check the oil level using the oil-measuring stick when the unit or equipment is on a level area. Then we inspect the integrity and fastening of the oil filters, the oil cooler, the oil pump, the oil lines and the condition of all the connections and packings of the lubricating system.

We change the oil in the lubricating system in being guided by the condition of the oil at the moment of the check and the number of kilometers traveled or engine hours for the engines and units. For example, the period for changing oil in units employing the 90ER transmission oil is 40,000 km or 4 years.

As is known in draining the oil from reduction gears, if it is not first heated to 323-333°K (50-60°C), resinous deposits and sludge are left in them. For this reason before filling the reduction gears with clean oil, they are flushed out with diesel fuel which has been warmed to 323-333°K (50-60°C).

For flushing out the cooling system of the engines on the basic types of equipment, we employ a solution of lactic acid. We fill the cooling system with a 6 percent aqueous solution of lactic acid which has first been warmed to 70-80°C (343-353°K) (the solution is prepared by mixing 94% water and 6% lactic acid and stirred until a uniform mix is obtained). The engine is restarted at idling speed and let run for 10 minutes after which the solution is left to stand in the cooling system until bubbling stops. (The radiator cap must be removed and the solution must not stand for more than 3 hours in the system.) After draining out the solution, the system is flushed with clean running water two or three times, after which the system is filled with a 0.5% aqueous solution of bichromate which is left to stand 10-15 minutes and then drained out.

For flushing out the cooling systems of engines having aluminum cylinder heads, we prepare a saturated solution of trinitrophosphate (100 grams of trinitrophosphate per liter of water) and just before filling the cooling system we dilute it with water to a concentration of 100-150 grams of trinitrophosphate per 10 liters of water. The solution stands 72 hours in the cooling system of the vehicles with the solution being topped off every 12 hours. After this it is drained and flushed with clean water separately for the radiators and the cooling jackets of the engines.

On engineer equipment the engines of which have cast iron cylinder heads, we flush the cooling systems with a solution containing 1-1.5 kg of caustic soda which has been heated to 363°K (80°C). After 30 minutes, the system is flushed with clean water. We pay particular attention to the proper working order of the thermostats. These can be checked without removing from the engine. The thermostat is in proper working order if in warming up the engine the upper tank of the radiator is cold with the thermometer arrow indicating a temperature below 343°K (70°C), but upon reaching this temperature the radiator tank quickly warms up. For a more accurate test of the thermometer, it is removed from the engine and placed in a vessel with water. When the water is heated on a hot plate, with a properly working thermostat the valve must begin to open at a temperature of 343°K (70°C) and be completely open at 358°K (85°C).

In preparing the engineer equipment to operate under winter conditions, special attention is paid to the servicing of the starting heaters. For example, during the STO on the TMM-3, without fail we remove the nozzle of the starting heater for the base KRAZ-255B vehicle. The opening in the chamber with a diameter of 0.3 mm and the central opening in the body with a diameter of 0.42 mm are cleaned with an iron wire or a needle having a diameter not larger than 0.45 mm. The parts of the nozzle are washed with gasoline or clean diesel fuel. After reassembly, the spraying of the fuel from the nozzle is checked and it must be in the form of fine-mist cone.

During the STO without fail we check the technical condition of the generator, in lubricating its bearings, we inspect the fastening of the electric wires, their insulating, the clearance between the contacts of the safety breaker (this is adjusted to be 0.3-0.45 mm) between the electrodes of sparkplugs with ordinary ignition (0.6-0.9 mm and with transistorized ignition 1.0-1.2 mm). Oily contacts are cleaned.

Sediment is removed from the tanks of the hydraulic systems of engineer equipment (2-31). After this we check the oil level and when necessary fill it to the required amount. We clean the dust and scale off the cylinder rods. After filling with hydraulic fluid the work of the system is tested as well as the filling of all the tanks and when necessary extra oil is added.

In servicing the equipment, it is essential to carry out acceptance testing of the individual assemblies, mechanisms and units. The complete and prompt performing of the jobs involved in preparing the engineer equipment for winter conditions, the accurate and prompt inspecting of their execution, the creating of the necessary facilities, and the observance of all the operating rules and standards--all of this guarantees high reliability and trouble-free operation of the engineer equipment during the winter operating period.

#### Communications Equipment

10012

Sofia VOENNA TEKHNKA in Bulgarian No 8, 1983 pp 32-33

[Article by Capt Pencho Kirev: "Communications Equipment"]

[Text] The communications equipment in use by the troops is complex technical devices which require that the engineer and technical personnel make a great

effort to maintain this equipment in constant technical working order and high combat readiness. This is achieved only with its correct operation over the year, with the regular performing of adjustments and the organizing and high-quality execution of seasonal maintenance.

Seasonal maintenance encompasses a range of activities which can be performed only by the joint efforts of all the personnel. A mistake is made by those who feel that this is a question for specialized bodies or who leave the work completely to the crews.

The preliminary preparations hold an important place in the effective execution of maintenance and this should begin by the issuing of a unit order.

The order gives a brief analysis of the operation of the communications equipment from the period of the previous maintenance up to the present and indicates which of the failures during this period occurred as a consequence of poor quality seasonal maintenance. The order establishes what measures must be taken to prevent accidents and outlines the measures which confront the personnel in the forthcoming maintenance. The order sets out the time and procedure for performing the maintenance and the membership of the commission which will accept the equipment.

On the basis of the commander's order and the requirements of the supervisory documents, the ZKTCh [Deputy Commander for Technical Affairs] draws up a plan of measures to prepare the communications and radar equipment for summer (winter) operation. Everything necessary for the maintenance is obtained from the superior level and is promptly distributed to subordinates. The plan makes provision for 2-day exercises for the engineer and technical personnel, the commanders and the chiefs of the stations to study the servicing procedures and the particular features of readying the equipment for summer (winter) conditions. At these exercises demonstration servicing is performed, particularly on newly received equipment.

The plan of the ZTKCh indicates what repairs and on what level the servicing is to be carried out, and what activities are to be performed to ready the equipment for summer (winter) conditions. It must not be forgotten that the measures of Regulation 5 or 6 differ from those to ready the equipment for summer (winter) conditions. The plan ends with the activities to monitor the course of maintenance by the unit staff. The section is worked out in detail for the types of equipment, the inspection time and who performs the inspection.

The ZKTCh also works out a detailed schedule for the sequence whereby the servicing of the equipment is carried out. From the schedule one can see what equipment is to be serviced, by what subunit, at what time and at what place. The schedule is approved by the remaining staff services.

After the approval of the plan by the unit commander, copies are made for the subunit commanders. On the basis of these copies, the subunit commanders, in proceeding from the present state of the equipment and the training of the personnel, draw up a plan of measures to ready the communications equipment for operation; this is accompanied by a schedule plan, it is broken down by days, made up in the form of a table and put up in a prominent place.

The subunit commanders acquaint the platoon commanders with the contents of the plan. The platoon commanders, on the basis of the plan and the schedule of the company commander, the plant regulations for the equipment and their technical state, prepare plan quotas according to the form of the NTESS [technical rules for communications equipment]. The plan quotas are checked by the company commander after which they are turned over to the crews.

The crews become familiar in detail with the assignments set out in the quotas. The designated executor of a flow sheet or quota prepares independently to carry out the planned work. In preparing the assignments or with a regulation, only the number of the flow sheet or the paragraphs which are to be carried out for the given regulation five or six are given. In instances when factory regulations are lacking, the planned work is written out from descriptions, manuals and so forth.

The preparing of the plan assignment is one of the most important activities for a platoon commander and requires a detailed knowledge of the technical sequence of the work to be performed in executing the regulations, the capabilities of the crew and the assistance which will be provided by the specialized bodies. The plan includes specific seasonal jobs such as the replacing of electrolyte and lubricants, the recharging of fire extinguishers, the mothballing and demothballing of heating equipment, the repair and outfitting of places for storing and servicing the communications equipment and so forth.

The preliminary preparations also include the undertakings of the party and Komsomol organizations to mobilize the personnel to effectively carry out the repairs.

The organization and procedure for performing the work are of crucial significance in the maintenance. Practical experience has shown that over a period of time, changes occur in the equipment caused by the processes of aging and wear and these may not be discovered by built-in devices. Hence, the need arises in carrying out repair Regulations No 5 and 6 to check a number of equipment parameters using various types of autonomous meters and rather complicated metering methods which require the corresponding preparations for carrying them out and in many instances significant losses of time.

Calculations and practice indicate that in most instances for carrying out repair Regulation 5 at least 2 weeks are required and for repair Regulation 6 3 or 4 weeks depending upon the unit where the repairs are being carried out.

Due to the large amount of work and the complexity of the tasks carried out in the seasonal maintenance, the unit commander's order appoints a special commission the membership of which includes the leaders of the technical operations service and skilled specialists for all types of communications equipment. The commission assigns to the brigades (groups) the types of communications equipment so that each brigade (group) will be evenly loaded during all work time.

Depending upon the specific conditions, these groups set up special centers either under the unit workshop or directly where the basic communications equipment is located. The work of the groups is directed by the unit ZKTCh.

Let us point out certain general provisions on the procedure for organizing the work. It is obvious that first the basic work should be performed by the crews and at the same time the groups of specialists prepare the metering equipment and the remaining facilities of the centers. After the basic repairs are done, then the seasonal maintenance is performed and after this the parameters are checked. After the completion of the prescribed maintenance, the appropriate notes are entered in the form and log for recording the repairs.

Inspection and acceptance of the equipment are an important aspect for the correct execution of seasonal maintenance. In carrying out the last section of the plan of the ZKTCh, the appointed officials supervise the course of maintenance, the complete and effective execution of the repairs and the observing of the already approved schedule. Very frequently these exceptionally important activities of the staff are underestimated. As a result of this, there is no complete and reliable information on the course of maintenance and hence the measures are not effective. In order for there to be effective control, the competence of the inspectors is of major importance. Thorough preliminary preparation for the questions which will be checked are essential. The inspector after performing the check reports to the unit commander on the results and proposes measures to eliminate the shortcomings.

If in the process of inspecting the parameters, it is established that using ordinary methods they cannot reach the standards, the maintenance on the communications equipment is stopped and for this they decide where the repairs are to be performed and by whom.

For the results of performing repair Regulation 6, the commission draws up a statement which shows the conformity of the complex communications equipment to the table and the technical state of each model of equipment. From the data of the record, a coefficient is established for the proper working order of the communications equipment for each subunit and for the unit as a whole, and a grade is given for the technical condition.

In addition to this, without fail the statement shows how the standards for annual operation and the times between repairs have been observed; the rules for keeping the technical specifications; the characteristic malfunctions discovered in the maintenance and the reasons for their appearance; the prompt repairing of the communications equipment, the state of the individual ZIP and other questions which are important for the unit. The statement designates the best subunits and crews and gives recommendations for eliminating the detected shortcomings as well as the procedure for restoring the workability of malfunctioning communications equipment. The statement is approved by the unit commander and on the basis of it an order can be issued on the results for performing the maintenance.

The unit commander up the chain of command reports on the fulfillment of the maintenance and the results of it.

The condition of the metering devices is of important significance for maintenance. The use of malfunctioning meters is not permitted.

A prompt study of the particular features in the seasonal maintenance of communications equipment, a thorough analysis of the committed weaknesses, the diligent preliminary preparation of the personnel and the complete performance of repairs 5 and 6 are a dependable guarantee for the trouble-free operation of the equipment under any conditions and hence for ensuring dependable troop control.

#### Maintenance of Chemical Warfare Detector

Sofia VOENNA TEKHNKA in Bulgarian No 8, 1983 pp 33-34

[Article by Engr Maj Ivan Popov, candidate of chemical sciences: "Maintenance and Keeping of the Troop Chemical Reconnaissance Device"]

[Text] The troop chemical reconnaissance instrument (VPKhR) is the basic instrument for conducting chemical reconnaissance.

The maintaining of the VPKhR in constant combat readiness requires systematic technical maintenance, prompt detection and elimination of malfunctions as well as correct keeping and storage. Technical maintenance of the VPKhR is daily (carried out in turning on the instrument) and periodic (once a quarter). This is done by the chemical warfare scouts to whom the instruments are assigned.

Daily technical maintenance of the VPKhR includes the external inspecting of the instrument, the removing of moisture and dirt, the inspecting of the pump, the cleaning of the ampule breaker and pump head; checking the working order of the pump; checking the electric flashlight; cleaning the heater of dirt; making sure the instrument is complete; eliminating malfunctions.

In addition to the designated activities, with periodic technical maintenance, the completeness and condition of the heater are checked and the instrument is painted.

The external inspecting of the instrument consists in checking the condition of the housing and the latch, the holder of the pump, the condition of the pump, the condition of the detector tubes (DT), the attachment and the flashlight. Moisture and dirt are removed with a dry cloth.

The indications of a malfunctioning DT are: broken edges or broken ampules; a significant leaking of the filler; a change in the color of the DT with a yellow ring from yellow to orange; a change in the coloring of the fluid in the DT ampule with three green rings from colorless to yellow; a change in the coloring of the fluid in the bottom ampules of the DT with a red ring and a dot from yellow to pink or red; the lapsing of the service life of the DT.

The usability of the DT after its service life can be checked using an imitation DT. For each type of detector tube there is an imitation one. The procedure for using the imitation DT is given on its label.

The detector tubes with one yellow and three green rings can be considered good if after pumping the necessary amount of air through the two tubes (imitation-detector) the coloring of the filler corresponds to the color standard. The

tubes with a red ring and a dot are considered good if the standard time for the changing of the red coloring of the filler in the test tube to yellow is 2- and more fold longer than that of the control after the pumping of the necessary amount of air through the imitation and test tubes.

Whole (unbroken) DT with altered color of the filler or the solution in the ampules as well as out of date ones can be used for training purposes.

The examination of the hand pump includes: disassembly of the pump (the handle and head of the pump are unscrewed, the valve device, the piston and the ampule breaker are taken out); all the parts of the disassembled pump are inspected; these should not be dirty, have particles of glass or a damaged paint surface; the rubber valve must be soft and fit snugly to the surface of the seat; the completeness of the packing and sleeve is checked.

The knife for cutting the DT must be sharp, the saw of the ampule breaker must be straight and sharp. Dirt and moisture are removed with a dry cloth. The sleeve and inner surface of the cylinder are cleaned and lubricated only with industrial vaseline.

After the reassembly of the pump, its proper working order is tested. For this purpose any unopened DT is put in the socket of the head. The pump handle is pulled up as far as possible and after 3-5 seconds is released. With a correctly working pump the handle returns quickly to the initial position.

The flashlight is inspected by inserting a dry cell into the socket and turning it on.

The cleaning of the heater includes its inside wiping off and the cleaning of the outside surface of the central tube of the heat cartridge. In periodic inspections one should also clean the surfaces of the three metal tubes designed to heat the DT.

In checking the heat cartridges, one should remove the dirt caused as a result of spontaneous activation (from sharp blows or dropping). Used cartridges are discarded and their sockets cleaned.

Bad DT, rubber gaskets, the sleeve and broken glass parts are replaced from the spare set.

The noted malfunctions are eliminated by the chemical warfare scouts and chemical workers. A damaged or hardened piston sleeve is replaced by a new one. A dirty rubber valve and seat should be cleaned of glass particles while a hardened or damaged valve should be replaced. The rubber socket for the DT in the pump should be cleared of glass pieces with the blade for cutting the DT taken out and cleaned. A damaged socket should be replaced. A dull blade for cutting the DT is changed by putting the holder on the opposite side while a damaged blade is replaced. A bent ampule breaker is straightened and when necessary sharpened. If the flashlight does not go on, the dry cell or the bulb should be replaced. The broken glass cylinder of the attachment should be changed. A damaged or hard-to-move latch on the pump is cleaned of dirt or straightened.



With the contaminating of the housing of the VPKhR with liquid-drop strong toxins it is essential to carefully remove the noted drops with pads soaked in a solvent (gasoline, alcohol, kerosene and others) after which the contaminated surfaces are treated successively with pads moistened with the decontaminating solutions from the individual decontamination set of KID [a type of individual dosimetric kit]. The decontaminated surface must be wiped with pads moistened with water, after which dried with a dry cloth. The decontaminating of the instrument is carried out outside the contaminated area wearing a gas mask and protective gloves.

If drops of strong toxins get inside the instrument, it is essential to remove all the removable parts and decontaminate it. The entire external surface of the housing is also treated. Contaminated cassettes, antismoke and protective caps are destroyed. With the severe contamination of the pump, it should be completely taken apart. Decontamination of the disassembled pump is carried out so that the decontaminating solutions do not fall in the valve. After decontamination the pump is wiped with a dry cloth and immediately lubricated.

If time and good conditions are available the VPKhR should be allowed to air for 10-15 hours after decontamination.

In decontamination, the metal and glass parts of the VPKhR should be wiped with pads soaked with water after which they should be wiped with dry cloths.

The instrument can be stored in an unheated area as well as in reconnaissance vehicles. Storage of the instrument in heated areas can lead to a sharp decline in the service life of the DT, particularly those with the red ring and the dot. In warehouses the instruments should be kept packaged.

The technical maintenance of instruments which have been in extended storage should be carried out once a year simultaneously with the replacing of the no-longer good DT.

The regular and high-quality technical maintenance of the VPKhR is a guarantee of its unfailing and continued work. This requires the commanders to create good habits in the chemical scouts, to supervise and require the prompt and high quality execution of technical maintenance.

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MENTAL, PSYCHOLOGICAL STRESS OF RADAR OPERATORS DESCRIBED

Sofia VOENNA TEKHNICA in Bulgarian No 8, 1983 pp 11-13

[Article by Engr Col Stoyan Andreev, senior science associate and candidate of technical sciences: "The Operator in Front of the Radar Screen"]

[Text] Very frequently the people receiving data from a radar hundreds of kilometers away will say: "Operator Ivanov is at the screen now." The sense of this distant recognition of the "signature" of an operator consists in the following. A radar presents everything that is seen in space in a coded image. Only the ability and talent of the operator can disclose the valuable information concealed in this image and transmit it to the personnel who will employ it for controlling the airplanes, missiles and weapons.

What are the specific requirements which are placed on the mental, intellectual and moral qualities of a modern radar operator?

An operator, with the aid of a radar, must carry out the following tasks: against the background of the complex diversity of images, discover the radar targets; to identify the images of the targets (aircraft, missiles, balloons, metalized strips and so forth) and extract their basic information characteristics; recognize their affiliation (both friendly and enemy aircraft can be flying in the space); to determine their coordinates (the bearing, angular distance and altitude).

These problems are not solved so simply by a person, but the difficulties do not stop here. With a complex radar situation, in the space observed by the radar there can be flying simultaneously not one or two, but rather scores of aircraft at different altitudes, on different headings and carrying out diverse tactical missions in various areas. In addition to this, some of them can be enemy ones and send out special deception signals from the target to be concealed in them, to remain unnoticed by the operator and consequently not fired on by the air defense weapons. One other impeding factor: the detection, identification and recognition of each target, the determining of its coordinates and the transmitting of these to the control posts of the aircraft and missiles must be done in real time simultaneously with the scanning of space by the radar.

Very frequently in 20 seconds it is necessary to provide information on more than 10 targets and this means that the human operator in a very short period

of time must process a large amount of information and with great accuracy as well as significant aspects of creative interpretation. It is obvious that the human capabilities of satisfying these requirements, as high as they are, are limited. This gives rise to a number of questions of a fundamental and scientific nature.

Does it make sense to design radars with very great information capabilities, for example, to detect and track simultaneously 1,000 targets if the operator can process information only on 20 of them?

On what factors does the quality of an operator's work depend and in what manner?

Research has shown interesting quantitative and qualitative dependencies between the characteristics of the radar situation shown on the screen and the mental characteristics of the operator. It turns out that the operator devotes most time (42.6 percent) to scanning for the target signals in a complex radar image. After this in terms of the amount of work (28.3 percent) comes assessing the situation on the screen, that is, tracking the movement of the targets, determining their nature and discovering the tactical purpose of their missions. The remaining part of the operator's effective time is used in carrying out technical tasks such as calculating the target coordinates, transmitting their characteristics to the aircraft control posts, selecting the radar operating modes and so forth.

The basic conclusion from the given experimental results is of fundamental significance: the largest part of the radar operator's effective time is devoted to creative work. This result suggests that precisely in this area a solution must be sought to the problems of sharply increasing the quantitative and particularly the qualitative advances of the radar operator's information activities.

Modern military engineering psychology [human factors] which, incidentally, has developed in the process of solving precisely these problems, gives us the results which are of crucial significance not only for improving the work of the operators, but also for developing radar and the aircraft and missile control systems.

We have already pointed out that the radar images of objects in space and their reciprocal relationships are not the same as they are in reality. For example, on a screen against the background of several light spots two bright points are moving toward one another. To what actual situation can this elementary image correspond?

The light spots can be reflections of the tops of mountains over which aircraft are flying the images of which are the moving bright points. But how much information is carried in the particular features (diameter, brightness and nature of contours) from these moving bright points? They can be the signals from a bomber and a pursuing fighter, from a fighter and a reconnaissance aircraft and so forth. The number of possible combinations just from two targets (the two moving points) and six types of aircraft is 32. In other words, the simplest radar situation shown on a radar screen can correspond to 32 different situations in actual space.

Who will decipher the true image and correctly so? This must be done by the radar operator. With more complex and very complex situations an astronomical number of possible combinations is obtained between the actually observed objects and their radar images. Just this quantitative requirement on the radar operator's work shows how difficult, responsible and creative it is. In order to successfully overcome these difficulties, it is essential consciously and in accord with the methods elaborated and tested in an actual combat situation to solve certain basic psychological problems in the "operator--radar screen" system.

The radar image on the radar screen must be viewed by the operator as a range (combination) of various signs and as a physical structure of real objects in real space with an appropriate assessment of the importance of each object for carrying out the air defense task in a certain area. This is in no way easy but without such a level of training, mastery of the screen cannot be achieved. One of the basic elements in this mastery to which the young specialists so strive is the ability to "see" through the screen the actually observed space, that is, real forms and relationships. These are requirements of the human psyche.

The relationships between the objects in observed space and the signals of the radar screen are connected by linear dependences (the number of targets, the distances between them, reciprocal position, speed of movement, direction of movement and so forth) and with nonlinear values (their number, when they are very close and the radar observes them as a single complex object and so forth).

The first group of relationships can be established comparatively easily by the operator, while the second requires a great deal of knowledge, experience and creativity. In a certain sense a radar operator can be likened to an artist who by just a few lines is able to get across the most essential traits of a personality or situation, in leaving out an enormous amount of details which do not carry information. This creativity is realized by two psychological operations: the deduction of the essential and the elimination of the nonessential.

The procedure by which the operator analyzes the radar image is interesting and very instructive. He begins his analysis by a nondifferentiated perception of the depicted image, after this he moves on to its individual elements, running them successively through his mental "sorting house." After this, the radar image is recreated in his memory but now this is already something of a creative interpretation. Then he begins to manipulate the elements of this image which are already the mental images of real objects located in the observed space.

I recall once along with the experienced operator MSgt Ignatov I was watching on a radar screen the movement of an aircraft which was carrying out a very crucial mission. After the target made an abrupt turn, we lost it from our sight. Two or 3 minutes passed, but we did not see anything although it was traveling at a speed of over 1,000 km an hour. Moreover, the screen was almost completely covered by the reflections of clouds. However, the operator was not put off and said to me, without seeing anything on the screen: "There it is now." I was amazed but after a little the target actually had appeared. I asked him how he had done this and he explained that in his mind he constantly "saw" the aircraft against the background of the complex radar image regardless of the fact that

there was no signal from it on the screen. This is the highest manifestation of operator creativity whereby the ability to predict (extrapolate) the complex movement of an object in space is brought to great mastery.

In the process of carrying out the tasks of tracing the radar targets, experienced operators and navigators structure the radar image and after this work with generalized blocks of information. Thus they bring together (if this is possible) all the images of foe aircraft into one mental group and all the interceptor aircraft into another mental group and so forth.

The activities of an operator almost always are carried out with an acute lack of time because the situation which he is monitoring changes rapidly and in addition the amount of information processed by him is very great. And any lag in the processing of information behind the changes in the real situation entails aircraft or rockets directed late against the air intruders and the dangerous consequences stemming from this. Thus, very great mental stresses are created and failures or mistakes in the operator's work may commence.

× Psychological research on these failures and mistakes shows very interesting patterns valid for any operator of complex military-technical systems.

With the complicating of the radar situation, some of the operators begin to make mistakes in figuring the target coordinates, they confuse their numbers which means that they mix them up and after this there can be a total failure. The reasons for these mistakes are not the limits of human memory, but rather the loss of orientation in the situation. This means that the required strict conformity no longer exists between the objects in the observed space, their images on the radar screen and the operator's memory. The operator's memory is the last source from which information on real space is derived and to be turned over to those who use it. How is this memory improved?

The basic way for increasing the quality of an operator's effective memory is the study of the tactical concept in the observed situation. When the operator understands the basic enemy concept and the use of our weapons, the mental mechanisms go to work themselves or, as experienced operators say, everything goes into place.

Nevertheless, the productiveness of the operator's memory depends upon the methods of remembering the radar situation. Practice has shown that very good results can be obtained by observing the following rules: precise definition of what information is to be remembered (the numbering of the targets, their characteristics, the position of terrain features in various sectors); the separating of the main from the secondary depending upon the tactical plan of the situation; the use of any (even a second) pause for repeating the remembered situation in your mind; the skillful structuring of the information shown on the screen ("friendly aircraft," "foe aircraft," "civilian aircraft" and so forth); the grouping of the targets by their position on the screen.

The operator's attention is of primary significance for air defense. His sharp eye is the first to spot the air enemy on the radar screen. For this reason this psychological characteristic of an operator must be constantly improved. The following rules acquired in the course of many years of practical work have proven very useful: rapid selective distribution of the objects by observed

features (just moving marks, just "smooth" trajectories, just comparatively constantly shining objects and so forth); correct perception and rapid classification of newly discovered image on the radar screen by establishing its essential features, comparison with similar images and the "putting" of the new image in its place when the picture of the air situation which has already been formed in your memory; flexible control of the concentration of attention with a readiness to quickly switch to a new sector or to a newly arising situation.

The control of the operator is self-control. This is carried out either by admonishments to oneself such as "look alive, something new has appeared in this area...", or by asking clearly formulated questions of oneself: "What is this image, have I seen it another time, what is its mission?", and so forth.

The quality of operator activities depends extremely upon the complex characteristics of the operator's personality, that is, his ideological maturity, will power, intellectual and special training. I recall how a soldier in just several months, without going to a special school, became a first-rate operator of a most complex radar. Quite naturally precisely he was one of the initiators of the new campaign in the troops.

In this article we have touched on only some of the basic areas of engineering psychology which have direct practical bearing on radar. The difficult problems of the "operator--radar screen" system cannot be solved merely by improving the psychological characteristics of the operator. This is also being done now by automating the processes of detecting, tracking, identifying and recognizing the radar targets. But the rules or algorithms which are employed by computers to solve these problems have been created on the basis of studying the mental mechanisms of a highly gifted and trained person. This reflects one of the basic contributions of military engineering psychology to the development of the air defense system.

10272

CSO: 2200/18

TRIBUNA CRITICIZES POPE, VATICAN

AU031200 Prague TRIBUNA in Czech No 43, 26 Oct 83 pp 10, 11

[Article by Frantisek Kudrna: "What Is the Vatican's Policy Like?"]

[Excerpts] It is, obviously, no coincidence that Western information media have of late launched a campaign about an alleged restriction of religious freedom in the socialist countries, including Czechoslovakia. To that we can only say: All our citizens know well that freedom of religion in our country is anchored in the Constitution and in laws. They know well that no one interferes with their beliefs.

Our state is a socialist state, and it proceeds from a materialistic weltanschauung. Therefore, it is not surprising that it explains and propagates a materialistic approach and views. After all, this is an ideology with which the overwhelming majority of our population identifies. But it is also an ideology that in no way persecutes or humiliates those who think differently--provided, of course, that religion does not serve them as a pretext for subverting socialism. We will in no case permit that to anyone!

One thing is remarkable in this connection: It is interesting that we are being lectured about freedom by those who to this very day assert and lean on medieval theories, by those who prevent the dissemination of scientific findings. As one example, let us mention the case of Galileo Galilei, who proved that the earth rotates around the sun.

Today, even less informed people can see that world imperialism has launched psychological, economic, and military preparations for war, that war is becoming a real possibility. At the same time it is known that nuclear war would jeopardize the very existence of mankind.

Therefore it is no coincidence that on our whole planet people of various political convictions, various beliefs, races and professions are becoming active with the aim of preventing a global catastrophe. Among them also are numerous Roman-Catholic priests.

But, typical of the Vatican's attitude toward the struggle for peace is also the fact that Pope John Paul II--during his Austrian journey--did not

regard the issue of the preservation of mankind as important. And this in a situation when the tension in the world is rapidly rising!

The Roman pontiff again hears the voices of millions regarding the matter of mankind's existence. Although he speaks in favor of peace from the Vatican from time to time, these are only general statements. Not even with a single word are condemned those who are preparing a terrible bloodbath for mankind!

But when in Austria, the pope did not spare words of appreciation for the Austrian hosts for their care for migrants from the socialist countries, for the way they support the enemies of socialism. Thus, when we analyse the policy of the Vatican as a whole, we come to the conclusion that its strategy is again changing in the direction of unequivocal support for the most reactionary forces.

While the last two predecessors of Pope John Paul II, despite everything, were gradually more realistically approaching the realities of today's world, nowadays one can observe a turn toward the policy which in the past incurred that great loss of faith in the Catholic Church.

Today, the Vatican has become an active factor in the global strategy of imperialism to reverse the world development, and to liquidate world socialism and the progressive movements throughout the world.

Therefore it keeps silent, and thus tolerates the murdering in Latin America, Lebanon, or elsewhere; therefore those who are dying of hunger leave the pope indifferent, therefore he keeps silent to the dangerous war-like preparations of world imperialism.

But it would be a mistake to think that the Vatican is only one of the instruments of world imperialism. It also has its own interests. It wants to profit from its support of imperialism. The slogans about a "unified Christian Europe"--expressed, among other things, also during the pope's Austrian journey--fully attest to that. It is not the first time that the Church has proclaimed them. They have always been the expression of its hegemonist attempts.

However, the pope's domination of Europe always remained only a fiction and a wish. This will also be the case now; and also regarding the hegemonism of imperialism as well as restoring the Vatican's hegemonist rule.

CSO: 2400/79



CPCZ DAILY SCORES FRENCH SOCIALISTS FOR ANTICOMMUNISM

AU031904 Prague RUDE PRAVO in Czech 2 Nov 83 p 7

[Miroslav Courton's Paris dispatch in the "Note" column: "Into Whose Hands They Have Played"]

[Text] The congress of French socialists, which was held toward the end of last week, in Bourg-en-bresse in eastern France, adopted a program which determined the basic orientation of the governing Socialist Party (PS) practically up to the next parliamentary elections in 1986.

Basically, the socialists have agreed on the need to continue the domestic policy that they have embarked upon--a policy which has yielded certain positive results, but which nevertheless envisages also for the future a continuation of unpopular economy measures, without any more radical steps against the capital.

French foreign policy has not evaded the attention of the congress, either. The congress elevated certain Atlanticist and anti-Soviet elements, which have been appearing during the last 2 years in the statements of attitude issued by the PS and the government, to the level of a program which loyally reflects the foreign-political line pursued by President F. Mitterand.

Although the concluding congress document declares that "loyalty to the Atlantic Alliance does not yet mean Atlanticism," it is merely playing into the Atlanticists' hands. It calls for a "revision of the Yalta accords," and is thus in fact calling for a revision of the results of the postwar arrangement in Europe; it blames the Soviet Union for allegedly violating the strategic equilibrium in Europe, and it defends both the installment of new American first-strike missiles and the negative attitude maintained by France toward a discussion of French nuclear devices--because, allegedly, they are merely a "deterrent" in nature.

The document even claims that the "era of illusions" on the policy of detente has ended, but that nevertheless one cannot reject detente completely. With regard to Czechoslovakia and Poland the Socialists have truly original ideas, because they not only invited emigres as "guests" to their congress, but on top of that are arrogantly declaring that they are willing to develop "solidarity and cooperation" solely with the subversive elements of the two countries.

In certain other passages, too, the language of the concluding PS resolution at times resembles rather closely the terminology used by French rightwingers. Obviously this is not pure coincidence, but rather a confirmation of the French Socialists' shift to the right.

The foreign-political stands and arguments of the French Socialists are only playing into the hands of Washington and NATO, into the hands of the reaction; and in their consequences they harm detente, cooperation, and peace.

[Bratislava PRAGUE in Slovak on 1 November 1983 carries on page 7 in the "On the Margin" column a 350-word commentary by Julius P. Loerincz, entitled "Fire at the Fuse." It deals with the congress of the French Socialist Party and its concluding document, nothing that it calls for a revision of the Yalta accords and, "in this context, speaks about such terms as 'detente and dialogue' as means for inciting those forces which are striving to internally disintegrate the socialist countries and to effect political changes in Europe." The commentary then states that such concepts recall John Foster Dulles and the era of cold war, "as well as the programmatic line of the revanchist circles which have not become reconciled to the results of the World War II." Loerincz says that "the world is flabbergasted" by Mitterand and his party "zealously advocating" the deployment of U.S. missiles in Europe and by France "playing the dirty role of imperialist gendarme in Chad and Lebanon." He states that the French Socialists "have now literally set fire to the fuse, because how else can one assess their declared demand to revise the Yalta accords which, together with the agreements of Tehran and Potsdam, expressed in the international sphere the results of the joint fight of the peoples against German fascism and Japanese militarism," and are the basis agreed on for the postwar arrangement in Europe and for the relations between European states; and concludes his commentary by stating: "The leading political forces of the French socialists are more and more emphatically becoming the prisoners of their anticommunism; this is not changed in the least by the fact that they also have communists in their government. Obviously they need the communists particularly because they need somebody to share their failures, and also in order to be able to retain the questionable adjective 'leftwing' in connection with the government."]

CSO: 2400/79

## CZECHOSLOVAKIA

### BRIEFS

NEW CONTROL COMMISSION OFFICIAL--The 11th session of the CPCZ Central Control and Auditing Commission, which was held in Prague on 20 October, released Miloslav Boda from the post of deputy chairman and member of the leadership of the CPCZ Central Control and Auditing Commission, in connection with his appointment as CSSR minister of labor and social affairs. It appointed Eugen Turzo, chairman of the CPSL Central Control and Auditing Commission, as member of the CPCZ Central Control and Auditing Commission and elected him deputy chairman and member of the leadership of the CPCZ Central Control and Auditing Commission. [Summary] [AU261941 Prague RUDE PRAVO in Czech 21 Oct 83 p 2 AU]

VISITING CUBAN PARTY DELEGATION--A "study" delegation of the Cuban Communist Party [CCP] Central Committee, led by Carol Miranda, head of the CCP Central Committee Department of Social Organizations, arrived in Prague on 21 October. The delegation was welcomed at Ruzyně Airport by Lubomir Prochazka, head of a CPCZ Central Committee department. [Text] [Prague RUDE PRAVO in Czech 22 Oct 83 p 2 AU]

SLOVAK SOCIALIST ACADEMY CONGRESS--The Slovak congress of the CSSR Socialist Academy, which was held in Bratislava on 22-23 October, reelected Pavol Paska chairman of the Slovak Central Committee of the CSSR Socialist Academy. [Summary] [AU261941 Prague RUDE PRAVO in Czech 24 Oct 83 p 1 AU]

CZECH SVAZARM CONGRESS--The Fourth Congress of the Czech Union for Cooperation with the Army (Svazarm), which was held in Prague on 22-23 October, reelected Miloslav Vrba chairman of the Czech Central Committee of Svazarm and Jaroslav Kovarik and Rostislav Ricanek deputy chairmen. [Summary] [AU261941 Prague PRACE in Czech 24 Oct 83 p 8 AU]

VENEZUELAN DEPUTY FOREIGN MINISTER--Official talks with a delegation of the Venezuelan Ministry of Foreign Affairs, led by Deputy Minister Just Oswaldo Paez Pumar, began at the CSSR Foreign Ministry in Prague on 22 October. The CSSR side to the talks is headed by Stanislav Svoboda, CSSR deputy minister of foreign affairs. [Text] [Prague RUDE PRAVO in Czech 24 Oct 83 p 2 AU]

CSSR-VENEZUELAN CULTURAL AGREEMENT--Yesterday in Prague, CSSR Minister of Foreign Affairs Bohuslav Chnoupek received Justo Oswaldo Paez Pumar [name as

published], deputy minister of foreign affairs of the Republic of Venezuela. The same day, at the close of official talks, the Venezuelan guest and Roman Narozny, CSSR deputy minister of foreign affairs, signed an agreement on cultural cooperation between the CSSR and the Republic of Venezuela. [Text] [AU301721 Prague RUDE PRAVO in Czech 26 Oct 83 p 2 AU]

BURMESE ENVOY ENDS MISSION--U Hla Swe, ambassador extraordinary and plenipotentiary of the Socialist Republic of the Union of Burma, has left the CSSR for good, following the termination of his diplomatic tour of duty. He was seen off at the airport by Vilem Pardubsky, deputy head of diplomatic protocol at the Federal Ministry of Foreign Affairs. [Text] [Bratislava PRAVDA in Slovak 31 Oct 83 p 2 AU]

MEETING OF PARTY SECRETARIES--A statewide meeting of secretaries in charge of political and organizational work of regional party committees and the city party committees in Prague and Bratislava was held in Prague on Monday. It was chaired by Mikulas Beno, secretary of the CPCZ Central Committee. The meeting dealt with the procedures of ensuring the resolution of the CPCZ Central Committee Presidium of 14 October 1983 on holding members meeting of primary party organizations at the beginning of 1984 and with the current tasks of the party's political-organizational work in implementing the conclusions of the 16th CPCZ Congress. [Text] [Prague RUDE PRAVO in Czech 1 Nov 83 p 1 AU]

NEW COMMISSION CHAIRMAN--CSSR President G. Husak appointed on 1 November 1982 CSSR Deputy Premier Jaromir Obzina chairman of the State Commission for Scientific-Technical and Investment Development, simultaneously relieving him of the management of the Federal Ministry of Technical and Investment Development. [Prague RUDE PRAVO in Czech 2 Nov 83 p 1 AU]

SLOVAK COMMISSION HEAD--At its 28th session, which was held yesterday and which was chaired by Slovak National Council (SNR) Chairman Villiam Salgovic, the SNR Presidium appointed Vaclav Vacok, deputy premier of the Slovak Socialist Republic (SSR) chairman of the Slovak Commission for Scientific-Technical and Investment Development. The appointment was proposed by SSR Premier Peter Colotka, and becomes valid as of 1 November 1983. [Excerpt] [Bratislava PRAVDA in Slovak 2 Nov 83 p 2 AU]

CSO: 2400/79

INTENSIFIED FDJ YOUTH RECRUITMENT FOR MILITARY

East Berlin JUNGE GENERATION in German No 9, Sep 83 pp 60-62

/"Questions and Answers--About the Next Generation of Career Military"/

/Text/ What is the FDJ concentrating on in its drive to secure recruits for military careers?

The recruitment and training of future noncommissioned officers, warrant officers and career officers is an indispensable part of the mass political work of the socialist youth association. The directors of the FDJ see to it that the political atmosphere in the Pioneer and FDJ collectives promotes and consolidates the determination of youths qualified for military careers. The aspirants have in the FDJ groups and basic organizations the possibility to gather experiences in political work. The FDJ directors devote special attention to the friends who want to enter on a police officers career.

The varied forms and methods of socialist military education which are differentiated according to the age of the Pioneers and FDJ members, (the Pioneer exercise "Friendship," the Hans-Beimler Competitions, the FDJ members in camp training of military instruction or in the premilitary career training of the GST among others), are especially useful for purposeful recruitment and career preparation.

Accepted applicants are to be included in the preparation and execution of such FDJ initiatives so as to help them in developing political and moral attitudes and character qualities which are prerequisites for a military career.

--The FDJ district offices provide continuous support to "FDJ aspirant collectives for military careers" in which an important part of this political-ideological training and education task takes place. This is where aspirants can prepare themselves for their studies and/or their entry on active duty in accordance with their interests, preferences and needs. In the touristic project, which has by now become traditional, the military career candidates visit their future military academies and garrisons.

What are the items to which the FDJ leadership should pay particular attention in recruiting the next generation of career military?

--Long-term recruitment of future military career soldiers is a continuous military mission facing the FDJ along with its governmental and civilian partners.

--FDJ management offices everywhere are implementing the principles, guidance and schedules determined by the decision of the FDJ's Central Council office of 25 November 1981, entitled "The FDJ Mission in Long-term Recruitment of Future Career Military."

--FDJ zone and district headquarters must coordinate any measures incident to long-term military recruitment on the basis of appropriate agreements and plans with NVA defense commands, as well as with other government agencies and social organizations.

How does the FDJ go about increasing its share of long-term recruitment of military cadres?

In view of NATO armament and confrontation policies, the youth and scouting organizations use the peace effort issue to make greater efforts in recruiting suitable and reliable youths for military occupations. That is why FDJ zone headquarters charge scout units and basic FDJ organizations with the task of a specific preselection and recruitment process for future military careerists. The modus operandi is to be determined at every school in cooperation with the principal, the school party organization, the teachers, the parents' organizations and those in charge of recruitment. Experience shows that energetic and party-oriented discussions in scout and FDJ groups about class-appropriate attitudes on the part of all boys and girls toward the defense of socialism and peace are particularly successful in promoting decisions for a military career. That is why we want to discuss with the scouts and FDJ members of all age groups and school grades, such questions as: Who threatens the peace? What must be done to preserve peace? What can I contribute personally to prevent war?

It has been found time and again that national defense questions can be discussed effectively and lead to practical conclusions wherever scout and FDJ officials show an unequivocal attitude on those matters. In that task, they require the sensitive help and support by their teachers, but also by army members, reservists, recruitment officials, etc. in disseminating political insights and convincing arguments.

Additionally, the various forms of socialist military indoctrination in the primary secondary schools, e.g., the scout maneuvers and the FDJ Hans-Beimler-Competitions can be successful if they are structured by the scout councilors and the FDJ headquarters in such a way that they provoke military/political and military/technological interest among the scouts and FDJ members by providing memorable experiences and proficiency situations. In coordination with their military district headquarters, many FDJ district headquarters organize personal interviews in the FDJ groups of expanded secondary schools, trade schools, in plants and workers organizations, as additional sources of FDJ members' decisions to opt for a military career. Such initiatives should certainly be supported by government agencies and social organizations. It is quite consistent with FDJ sponsorship of the armed forces when FDJ district headquarters regularly select suitable individuals from among FDJ officials for active duty with the armed forces.

What improvements can be made in preparing individuals for a military career?

In our youth organization, we orient the preparation of future career noncoms, officer cadets and career officers in their FDJ basic organizations and in the FDJ collectives of aspirants for military careers toward firm class-appropriate attitudes, solid knowledge and aptitudes, as well as toward a personal desire for military activity.

One of the important prerequisites for this, as in the case of the state enterprise Jaenschwalde Youth power plant, is that the mission documents of FDJ basic organizations concerning "the FDJ's work for peace" contain specific items addressing the defense consciousness and the defense capability of all members. There the FDJ groups feel a sense of responsibility for their aspirants. The latter are respected for the fact that they have decided to do more for the preservation of peace than they are required to do by law. The candidates are given many opportunities of reinforcing their FDJ basic organizations' fighting strength and defense readiness and to solicit other comrades for a greater contribution to the national defense. They give periodic reports to the FDJ leadership or in membership meetings about their activities in the "FDJ aspirants' collective for military careers."

The aspirants' individual tasks are, among other things, devoted to good performance in their occupational training, to implementing the programs of the FDJ aspirants' collective and of the basic organization, or to increase strength and endurance. Experience in the state enterprise Erfurt radio plant shows the benefit of steering aspirants during their final year of occupational training into youth brigades which, together with their reservist collectives, pay particular attention to these comrades and reinforce their occupational preference. Aspirants for political officer careers are given every opportunity to prove themselves in the functioning of the youth organization and prepare for their nomination as candidates for membership in the party of the working class. FDJ district headquarters should be well aware of these individuals, should include them in the work of the district organization and should coordinate their social assignments with the leadership of the FDJ basic organization concerned. The latter is important because many aspirants are at times overloaded due to the great number of sources which contribute to their professional training. What is much more important is an increase in the quality level of individual interaction with their comrades. It has proven useful to coordinate with the district defense commands the aspirants' social activities and their individual tasks with the plans for their professional occupational training.

When is an Aspirants' Collective Doing a Good Job?

The "FDJ Collectives of Aspirants for Military Occupations" have proven to be, in all parts of our republic, the main form of occupational preparation through the socialist youth organization. FDJ aspirants' collectives such as the ones in Forst, Greifswald, Burg, Rudolstadt or Schoenebeck are successful because they provide an interesting, lively political/ideological educational activity which the aspirants enjoy and which motivates them to eager participation. The supervisors of the FDJ aspirants; collectives maintain personal contact with their aspirants and close liaison with the defense district command as well as

with the FDJ district office. The advisers of the FDJ aspirants' collectives are routinely included in planning and organizational activities. As frequently as possible, the aspirants' parents, girlfriends or fiancées are invited to attend various functions. Military/political seminars and discussions, visits to NVA camps and units and those of the Soviet Army, defense sport competitions and cultural events are organized in such a manner that they serve to answer the aspirants' questions, that they create memorable impressions, and that they establish a connection between the comrades and their future occupation.

#### What Are the Areas of Concentration for FDJ Zone and District Headquarters?

FDJ Zone and District headquarters make an effort, in their leadership function toward long-term recruitment of next-generation military careerists, to implement firmly the prescribed principles, guidance and schedules and to contribute to a joint effort between the government and civilian partners. To that end, it is a prerequisite that FDJ zone and district headquarters offices periodically analyze such problems as the following:

--Are military recruitment tasks specifically a part of the program documents of the FDJ district headquarters and of the mission documents of the FDJ basic organizations? What is the status of recruiting and training of military career recruits, and what tasks must be elaborated in coordination with the defense district headquarters for the FDJ basic organizations?

--How does the FDJ zone headquarters influence the content of the FDJ aspirants' collective's political-ideological work, and how good are the content, organization and effectiveness levels of the occupational preparatory training?

--How well do the FDJ basic organizations discharge their responsibilities toward the aspirants? What is the quality of the aspirants' societal activity within their FDJ basic organizations?

--What is done to ensure that tourist activities for career officer aspirants are implemented and that aspirants have an opportunity to participate in friendship visits to the USSR?

--What is done to provide recognition and awards and decorations? Is use being made of headquarters-supplied and locally provided items for long-term military recruitment?

The zone and district headquarters of the FDJ should always coordinate necessary actions and measures with the military district commands as soon as the latter furnish them specific information about such items as the status of preselection in the seventh grades, the conclusion of applications and acceptance in the ninth grades and admittance and induction into military training facilities.

In past years it has been shown time and time again that those FDJ offices, particularly FDJ zone headquarters, use good judgment, which conduct their initiatives for long-term next-generation military career recruitment in just as strict and exacting a manner as one would expect of other initiatives, e.g., in the economic domain.



SHORTAGE OF EDUCATORS IN BUDAPEST

Budapest MAGYAR NEMZET in Hungarian 15 Oct 83 p 4

/Article: "Shortage of Educators in Budapest"/

/Text/ The shortage of educators in Budapest still is a cause for serious concern. According to the latest survey by the Capital City Council there are 125 vacant positions in the kindergartens and 38 in the lower grades of general schools. In the higher grades there would be need for 77 additional educators, and in schools for retarded children there are 21 vacant positions.

At present more than 1,500 young educators are taking advantage of child care assistance, and the finding of replacements causes serious problems. Strenuous efforts to improve the situation were made in the districts at the Capital City Council before the beginning of the school year. They sought to find graduates of provincial colleges for the capital city schools and they looked up all the retired Budapest educators and asked them to accept employment again in the current school year. The councils provided service quarters for another hundred educators. To ease the shortage they increased the number of teachers employed without degrees; about a thousand were employed in the 1983-1984 school year, two-thirds of them are in continuation training and will obtain a degree sooner or later.

6691

CSO: 2500/60

RANKI DISCUSSES STRICTURES ON HISTORIANS

Budapest KONYVVILAG in Hungarian Aug 83 p 5

/Interview with Gyorgy Ranki by Tamas Nador; no date or place specified/

/Text/ He asks questions with the strictness of the analytical seeker for meaning, the coordinator, process investigator, one versed in laws. About the many and the individual, ordinary man, throughout length and breadth, profoundly and from the heights. To the extent possible, avoiding battle and puddle perspectives; with the deep breath of a low-odds winner, but still not drunk with utopias. He seeks to find answers, however, only with mature doubts, with an unfinished state of mind and consciousness giving incentive to research, by stepping over truths that are deemed final, with the daring pulse of freedom; and with a pulse of hope that is not at all free of risk.

/Question/ It is superficial to attempt gaining an insight into a book by the title, but this appears to be a good one that is characteristic of the East Central European area in which we live. What does it cover actually?

/Answer/ It characterizes some of the essays included in the book, particularly those which deal with theoretical and methodological problems. But in hard conceptualization an explanation of the idea is not to be found in the pages of the book. In my inaugural address to the Academy entitled "Mobility and Orbit" delivered in May of this year I discussed precisely and in condensed form my views on this subject. I stated that the problem of the so-called small states appeared for the first time in history (international politics and diplomatic history) in the 17th century. In my research area I found that this problem appeared more and more intensively on the international political scene in the 19th and 20th centuries. In a very contradictory way, as a part of antithetical processes. On the one hand more and more small or mini-states are being formed and on the other hand large powers capable of deciding the fate of the world by themselves are being born. It is well known that this is a completely new phenomenon in history, for the earlier conquering powers--not only the Roman Empire which was the master of the world in its time but also the German Third Reich of recent times had limited expansionist and destructive possibilities beyond Europe. Modern technology, however, has created an entirely new situation... The essence of the contradiction is this: on the one hand the nation states, to use a somewhat inexact term, have spread over the whole world while on the other hand power has been concentrated to an extent never before experienced.

The latter is regulated and limited at the most by economic and technological development.... The other main question which is dealt with in this study is the mobility and orbit of the small states in the Danube Basin. According to the traditional Marxist historical concept, in contrast to classical bourgeois history of the 19th century, which saw history in the struggle of states and nations, it is economic-social development that determines the course of historical progress. That is to say, the struggle of internal forces. (To project it to the political plane, we are speaking here of whether foreign or domestic policy has the priority.) In my view, we can no longer inquire into the priority of one over the other in such a simplified way. It can be imagined that a state powerful in international life by virtue of its great economic, political and military strength may have its foreign policy determined by the above-mentioned domestic forces. But in small countries it is an entirely different matter. They must take into account their domestic structure, their economic and social conditions, but at the same time these things will strongly define their mobility and determine their international relations. And frequently they must move in an orbit which does not unconditionally derive from their economic-social conditions and domestic politics....

/Question/ Your first essay on mobility and orbits is a reflection on the meaning of history--and historical writing. That is, the historian faces his doubts. Since these articles and lectures in the book were first put on paper a great deal of time has passed. Since then have your uncertainties and hopes changed?

/Answer/ My studies are the fruits of the past 10 years. I wrote the first one--on the role of Budapest in the economic development of the country--for the centenary celebration of the unification of Pest, Buda and Obuda. Thus my work on the "Budapest Elections of 1939" is from the first half of the 1970's. The others were written after 1976. My recently published work on the meaning of history I wrote for a Venetian journal in 1978, and it has not as yet appeared in Hungarian. Since then a great deal has happened in the world and in Hungary, but I feel that my question and the attempt at an answer has not lost its actuality. I emphasize the word "attempt" because in historical writing I do not accept any kind of "final" answer; as a matter of fact, I regard it as necessary that new questions be constantly raised and that the search continue. In any event, a great deal of worldwide scepticism has developed regarding historical writing in recent decades, and it has not been dispelled down to the present day. There were several reasons for this doubt and lack of confidence. In the years between the two worldwide catastrophes, but particularly during World War II, historical science was strongly "compromised" because it was possible to put it in the service of horrible goals. Most of the German historians were not direct followers of Hitler, but many of them joined up as Nazi propagandists. And although the outstanding Hungarian historians were not at all bound to the right wing, there were experts in our country also who tried to justify the existing system finally on historical grounds under the sign of a state and nation-centric historical concept.... Therefore, there were many after World War II to whom it appeared that historians had learned nothing, or at least very little, from history. Therefore, everywhere--and not only where Marxism conquered or became a political-ideological force--believed that it was necessary to have a new concept of history. And it became evident that even the science that had

developed between the two world wars and had been accepted as good and creditable was obsolete. Even for those who are not Marxists. Quite a few branches of the social sciences appeared, to be sure, and had a strong effect on historical writing although these sciences had been rather neglected before, particularly in Hungary--for example, economics and sociology. (It is another matter that we already have doubts in their almightiness as well.) Doubt and search for meaning accompany the science from the very rise of uncertainties or justification of the credibility of historical writing. And not only because it is subject to the prevailing thoughts of the world, or its ideas. But also because it is true that history is the schoolmaster of life; but the opposite is also true: life is the schoolmaster of history. We can evaluate the process of the 18th century only if we can place ourselves in the given era. But neither do we forget what has happened since the 18th century. Because it is not possible to investigate matters if we place them merely by themselves. Without relating them we can get nowhere. This too is a function and meaning of our science. One of the concluding thoughts of my writings to which I would like to draw special attention is that the historian must acknowledge the finiteness of his possibilities. It may happen, for example, that he cannot find appropriate answers to his questions. But this does not at all mean that he must or may renounce the raising of questions. Whoever does not try to search will soon be resigned to believing the world is not explainable. But I do not believe in irrationality.

/Question/ But we also have doubts of more recent origin: as is well known, in the 1950's historical writing adjusted to the politics of the day. And it was in style to explain everything and its opposite by twists and turns....

/Answer/ Undoubtedly historical writing in the 1950's barely managed to exist in the pressure of sectarian, vulgarizing daily politics. And this pressure has not completely disappeared since the 1950's--the simplifying and schematic outlook continued to have its effect. Of course, in different ways in the various workplaces of historical science--they arrived at various levels of refinement, depth and nuance. In the 1960's I tried to conceptualize it in this way: the poor student, the undergraduate, gives stereotype answers in our country also. These stereotypes vanish with the extent of his ignorance. Characteristically, however, it is immediately the quotations, slogans and formulas of the 1950's that "take over." The one-sentence, short cliches are easier to cram in, of course, than to analyze and evaluate our subject in a complex way. The historical twists and turns, the "methodology" of relativism, and the pseudodialectics of "on one hand and on the other hand" are a type of simplified outlook. These, too, are a falsification or lack of understanding, and it is not worthwhile to waste many words on them. Only continuous renovation and questioning offer a mode for complex investigation.... However, in the 1960's the maturation of our historical writing started, and beginning in the mid-1970's achieved a breakthrough. In many subjects and historical periods we have achieved important results.

/Question/ And you personally, what did you have to question, what did you have to reconceptualize? In other words, what is new in this book?

/Answer/ I divided my book in three parts: Theory and methodology; economic and social history; political history. In all three I try to stress a given idea, an attempt at reconceptualization. In my study on "Economy and History--the Crossroads of Economic History" I looked over the relationship of these two subject from the 19th century down to the present day. On one hand, I turn against the concept that has rigidly separated history and economics; and on the other hand against the simplification which sought to be economic by paying attention only to generalizations.... My work on "Questions of the 1929-1933 Economic Crisis" I wrote at the end of the 1970's when we still did not clearly see how deeply the new economic crisis would affect Hungary. I wrote that we still had no scientific picture which would actually show us the characteristic causes of economic crises in the 20th century. This is partly so because the long, crisis-free period after 1945 drew the attention of West European professional literature so that it dealt only with economic growth. And partly because--aside from a few notable exceptions--Marxist economic historical literature was stuck with generalizations like, for example, that crises are one of the accompaniments of capitalism, etc. With several specific analyses I sought to urge carrying the ideas further.... In the political historical part of the book I have included one of my most recent expositions. In my work "The Reluctant Satellite or the Last Satellite?" I seek an answer to why Hungary, the most reluctant satellite of the Germans, became its last satellite in response to external compulsion and certain internal forces. It was Hungary that protected its relative mobility in the German bloc until 19 March 1944 and the occupation. Only then was it pushed into the orbit that led it to the role of the last satellite. My study seeks to relate how this pair of contrasts is realized, how they run parallel, which one comes out on top and when. And I say that it is not a question of moral judgment how it happened. We need to understand a historical situation and find our country's place in it.

/Question/ How would you summarize your historical outlook? What kind of a historian do you regard yourself?

/Answer/ A non-Marxist historian once said that a Marxist historian can pose more substantive questions to history than the non-Marxist. The only question is To what extent will certain stereotypes prevail in his answers. Well, if this is true I would like to ask questions and to the extent possible go beyond the stereotypes in the answer.

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CSO: 2500/60

## PROVINCIAL TRADE UNION DEVELOPMENTS NOTED

## Developments After 1 Year

Lodz GLOS ROBOTNICZY in Polish 28 Sep 83 p 3

/Article by Cz. Z/

/Text/ A year has just gone by since the Sejm of the PRL voted on the laws concerned with trade unions and since the State Council's resolution on the matter of the principles and manner in which union organizations in factories are to be established. These were unusually important events for working people; they created an entirely new situation for the labor movement in our country. In conjunction with this, we asked leaders and members of trade unions from factories in Lodz from various milieus to share their reflections, thoughts and experiences from the period of the creation and development of union structures in plants, and from the renewal and expansion of union activity. Here are the comments of unionists:

Czeslaw Krzepicki, vice chairman of the NSZZ /Independent Self-Governing Trade Union/ of Workers at the Sz. Harnam Dye Industry Plant: "The law on trade unions was a necessary legal means for initiating activity. But, after all, we debated the subject of the shape and countenance of the union movement still earlier, unaware yet of what decisions would be made in relation to the suspended unions. We debated over good and bad elements in the work of both trade unions and Solidarity; we familiarized ourselves with experiences of the union movement in other countries. During the course of these debates, at the founding forum of OKON /Citizens' Committees for National Rebirth/, we determined what to do in the future in the trade unions and how to act anew. We touched on the matter of union diversity, concluding that since each of the unions advocates its own interests, the individual with his interests and needs are then lost along the way. We spoke of a strike, emphasizing that even though in our political system's environment it strikes a blow at the interests of workers and unionists, as the ultimate means of struggle it should remain. The trade union law settled the majority of matters exactly as we had debated, the sort of outlook we worked out in those debates. In my opinion, therefore, it has come up to my expectations.

However, the long period of several months building union structures was by no means a simple one. Distrust of our unions showed up and continues to show up.

This is the greatest barrier, but--in my opinion--it is surmountable. It can be overcome with proper union activity."

Mirosław Kowalik, member of the NSZZ of Workers at the Sz. Harnam Dye Industry Plant: "From my point of view, time will soon show and bring people around to the trade unions. They will be convinced of the need for belonging to a union when they need help in taking care of some matter or other. Today, in a period of enterprise reform, no one will offer a worker a hand, after all, except the trade union. Meanwhile, at this moment already, the new unions are doing a lot for personnel in spite of still modest capabilities."

Kazimiera Chodorwska, secretary of the NSZZ of Workers at the Sz. Harnam Dye Industry Plant: "Workers come to us with various troubles and concerns. We helped some negotiate a transfer to lighter work, in keeping with their wishes, we settled a good deal of matters concerning living quarters in a positive manner, we took on the defense of some workers against being fired. Workers who do not belong to the union turn to us also, and we try to help them as well. After all, the union is for everyone in the factory."

Bogdan Strzelecki, chairman of the NSZZ of Workers at the Vigoprim Worsteds-Carded Spinning Mill: "Until 1981 there were branch trade unions and Solidarity at our factory. And though they had different programs, there were no great animosities, extreme views and divergences as far as matters of personnel and the plant were concerned. It would seem, therefore, that we should have had an easy beginning. But--as it turned out--this was only apparent.

We had problems composing and registering the statute, taking over finances, seals, and the like. Why, the majority of us new unionists had no experience in these activities.

Today we are at another stage already. We are developing union structures. Since our factories' departments are located in five different places in the city, we are creating union groups which will appoint their own representatives in order to have better contacts at the day to day level.

We acquired and secured our place at the plant. We made a fine arrangement for cooperation with factory management, with workers' self-government and other sociopolitical organizations. Our union voice is counted in undertaking important personnel decisions, such as, for instance, the allocation of welfare funds, granting leave for sanatorium treatment, and the like. In precisely this way, through solid union activity rather than agitation, we wish to attract many still undecided workers at our factory to the unions. We want them to come of their own will and conviction.

We continue to confront many problems in our ongoing activity. Very likely, our greatest problems are financial, owing to the paucity of resources. But they do not obscure other essential personnel matters, at least. Among them I would place salaries first. We consider increasing production to be fitting and, by dint of this, salaries as well, as expressed in an agreement which was concluded between our plant and the minister not long ago. Money mobilizes people to make a greater effort. But--as I see it--a worker in the course of 8 hours of well-organized, productive and solid work should make enough in order to live respectfully.

In the near future, we want to fight for bringing back past standards in the allocation of cleaning agents and tea. We intend to try to improve conditions in our old factory, where people are bothered by excessive pollution of the air with dust and noise. This is about what is being done in this area today--where there is a window there is a ventilating fan, where there is a cubbyhole there is a washbasin--it is not a solution to a problem but patching holes, as in olden times."

Jadwiga Fornal, chairman of the NSZZ of Workers at the Lido Knitting Factory: "As I see it, the solutions which the statute on trade unions established are right and only reasonable. People have been waiting for trade unions, though a good many people were counting on a breakup of the old unions, while for many--to this day--a sentiment in regard to Solidarity has remained. Much time will still have to pass to talk these people around to the new unions.

Meanwhile, caution and sometimes mistrust, which we still come across among some workers, is an obstacle in organizing the union and in developing its activities. We do not have many activists who have at least dabbled a bit in social work in the past, whereas there are countless matters to be solved and to be settled. A public inspector of labor is needed at the plant--awaiting him are such matters as a need for improvement of lighting, as indicated by the staff at the Iwa branch. People turn to us with requests for help in settling matters of living quarters and in questions of apportioning vacations in the summer, the length of training for a job and with many other problems. Sometimes they are indeed minor affairs and problems, but very real for the workers. In the past few months of our work we have intervened and functioned in other ways in more than 50 such individual affairs of workers, not counting those which were able to be settled off-the-cuff during meetings with the factory administration or its individual sections. We feel we are needed by personnel and work without becoming discouraged--as I mentioned already--by the mistrust of some individuals or the sentiments of others."

#### Unionists Meet in Bialystok

Bialystok GAZETA WSPOLCZESNA in Polish 28 Sep 83 pp 1, 2

#### /Unattributed article/

/Text/ Yesterday, representatives of over 300 factory trade union organizations from the Bialystok region filled the conference hall of the Bialystok Provincial Administrative Office. The meeting was chaired by Danuta Pietsch, head of the Provincial Information and Advisory Team for Trade Union Matters. The primary purpose of the meeting was to introduce the provincial authorities to the problems disturbing union activists.

Above all, they were concerned with the market situation and winter provisions for workers. Apart from the governor, Kazimierz Dunaj, making their attitudes known concerning the problems brought forward were Vice Governor Jerzy Slezak; the director of the Provincial Administrative Office's Department of Trade,



Edmund Stajniak; and representatives of three major distributors--Spolem, Peasants' Self-Help and the Provincial Enterprise for Domestic Trade.

The pluses and minuses of control of sales by the plants were deliberated jointly. Some unionists proposed giving up this alleged convenience, since a serious burden has been placed on welfare departments of the enterprises, often accompanying it with a risk of additional payments from private pockets for an amateur business or for unnecessary quarrels among workers. The same assumption was made--viewing it from another angle--by a saleswoman in village sales. She complained that for many weeks she had to reserve three sofas delivered to her store for some plant; on the other hand, farmers who always patronized her store regarded the storekeeper who put goods aside with some disfavor.

Many critical observations referred to on-the-job meals. In addition, controversy resulted because the director of the Regional Meat Industry Enterprise guaranteed that workers engaged in crosscountry jobs receive canned foods rather than soup. Railway employees complained, on the other hand, that they receive nothing if the trip falls during the night hours going to Hajnowka, because their buffet gives out on-the-job meals only to 10 o'clock. The efforts made by railway employees from Czeremcha to ensure canned foods rather than soups have had no results so far.

During the second part of the meeting, the unionists were occupied with the topic of public inspection of labor, the activities of which are founded in a law passed by the Sejm not long ago. Ryszard Kornas, Regional Inspector of Labor, became familiar with the dimensions of dangers which occur at the work place and encouraged hastening the election of public inspectors of labor. Admittedly, the law sets 30 June of next year as the deadline, but inspectors were already elected in many plants and have begun working within the framework of their authority, cooperating with trade union administrations.

#### Unions, Self-Government Compared

Zielona Gora GAZETA LUBUSKA in Polish 5 Oct 83 p 3

/Article by W. L./

/Text/ Cooperatives have no workers' self-government. But a cooperative self-government does exist--the cooperative board of directors--the highest authority (within the framework of legislation to which it is bound). On the other hand, independent and self-governing trade unions do represent workers employed in cooperatives on the basis of a labor agreement.

How do these two bodies manage to cooperate? To be sure, it is not the same in each establishment. Let us attempt to answer this question, however, based on the still limited experiences of the General Food Products Cooperative in Zagan.

A board of directors that knows its rights and duties well functions here. It is made up of older and experienced cooperative employees. On the other hand,

the Spolem Workers' Trade Union was established only recently. Naturally, its achievements are not yet many. All the same, let us take a closer look at it.

Zdzislawa Chruscicka, a nonparty activist for many years, is at its head. She has won the trust of the employees with her activity and understanding of their needs. The fact that she is retired does not disturb anyone. To be honest, it even helps. The fact that she works in the union domain with an inborn passion allows her to devote, as indeed she does, a great deal of time to it. Her having received all the votes of the electorate with one exception in a secret election for presiding administrative officer speaks for itself.

Today, the union numbers 189 members (including 41 retirees). The number is growing slowly but regularly. Thanks to honest cooperation with the board of directors, one of whose members is the presiding officer of the union, its achievements become more and more significant. Lately, for example, it was decided to finance an assistance campaign for all pensioners and those on disability pension from the funds of the board of directors and union funds. Each of them will receive 100 kg of potatoes for winter gratis. Those with the lowest allowances (under 5400 zl) will receive in addition 2000 zl for purchasing coal.

There are other matters--rather unpleasant ones. Employment in administration must be reduced by two persons. Proper staff management requires this. However, it is a question of people, after all. The union representatives conducted talks with those concerned which were sincere and perceptive, marked with good will. Those workers expected to be let go were asked what they would want and what they were capable of doing. And then, appropriate positions of employment were found for them. The establishment letting the worker go benefits from this as well as the one which gained him for itself.

Many matters are settled between the union and the board of directors as well as the administration of the cooperative in a spirit of loyal, daily and direct cooperation. The leadership of the cooperative and the board of directors discuss with union representatives drafts of decisions on matters that are essential to work conditions and living situations of workers.

The union, for its part, already has settled more than one labor complaint. People turn for help by telephone and come to the union premises for it. How often--says Z. Chruscicka--the conversation begins with the words: "It is true I am not a member of the union, but I do not know how to place my child in a prechool. Can you help me, madam?"

Yet, other problems, at work and at home, are spoken of in the union. And the union tries to help if it can because this is its obligation. Besides, it does not limit itself to communications submitted to it alone. Members of the union's administration are among the people, they speak with them at their workplaces and inquire about their grievances. And so, for instance, shopkeepers complain at times about their clients, that they abuse them and afterwards make a notation in the official book of complaints and other remarks in addition. And even though one cannot always sort the wheat from the chaff in such matters, the union makes an attempt to do so.

Not long ago the factory's public inspector of labor assumed his duties and at this time a commission has begun functioning which, besides the public inspector of labor, is composed of representatives of the union, work safety and hygiene services, a technical worker, and a fireman working quarter-time. Within the scope of the fall survey of work conditions, the commission is visiting collective farm establishments: the butcher's shop, bakery, confections shop, slaughter house and sales locations. Based on observations made, recommendations will be made which will oblige the employer, i.e., the cooperative's administration, to take action.

On account of the organization being small in number, all members of the seven-member union administration, which includes the presiding officer, perform their functions as a community. The treasurer, on his part, took on the obligations of the union's bookkeeper. Such attitudes are much appreciated here.

12491

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## COMMENTS ON DACIA BY HUNGARIANS ATTACKED BY ROMANIANS

Cluj-Napoca STEAUA in Romanian Jun 83 p 46

[Article by Hadrian Daicoviciu: "Notes on Dacia"]

[Text] Captive to an Outmoded Idea

Professor Jeno Fitz of Szekesfehervar is a well-known and respected specialist in the field of Roman antiquities, and in particular in problems of the history of the province of Pannonia. Historical science is indebted to him for a number of interesting studies buttressed by well reasoned conclusions. In 1982 J. Fitz published at Budapest, in English, a book entitled "The Great Age of Pannonia (A.D. 193-284)." Viewed as a whole the book, which is aimed at a wide public in the West, may be considered to be a success for the author. The history of Pannonia during this "great age" lasting nearly a century, from Septimus Severus to the triumph of Diocletian and establishment of Roman domination, is skillfully depicted. The Roman civilization and culture which flourished in Pannonia at that time is also effectively presented. In short, the author of the book shows that he is thoroughly familiar with the historical and archeological problems of Pannonia, and in general of the Danubian provinces with which we are acquainted from many other works.

So much greater was my surprise when I read on page 63 of the recent book by J. Fitz the following passage referring to the third quarter of the Third Century A.D.:

"The frontiers along the Danube were reorganized. Despite the victories over the Goths and the calming of the unrest in it, the Empire no longer had the strength to defend a besieged Dacia against aroused barbarians. The first steps toward the fall of this ravaged province had been taken by Gallienus. It was the lot of an Illyrian emperor, Aurelian, to withdraw the troops from the ruined fortifications and, by resettling the remainder of the population South of the Danube, to abandon the conquests of Trajan. The deserted fields and meadows South of Somesul Mic were occupied by Goths and Taifals, while the Vandals and Gepids fought with each other for the mountains and valleys in the North."

It is very difficult for me to believe (although I must do so in the face of the evidence) that the foregoing lines were written by a specialist with the reputation of J. Fitz. I would not say that a good or even great specialist could not commit an error, but seldom has it been my lot to see such an accumulation of errors coming from the pen of a serious man of learning. All the sentences in the passage quoted, except the first, contain one or more untruths long since refuted by science.

It is very well known that at one time Dacia was formally abandoned by the Empire, but the work in question gives a very biased account of the reasons for this decision. It would appear from what J. Fitz says that Dacia was subjected to formidable barbarian pressure which ultimately led to withdrawal of the Roman troops. But according to ancient literary sources, the situation was not precisely as thus depicted.

It is true that both Eutropius (IX, 15, 1) and the Historia Augusta (Aurelianus, 39, 7) say of Aurelian that he no longer hoped that he could keep Dacia, but both sources clearly link this sentiment of the emperor to the fact that he saw Illyria as devastated and Moesia lost. Any objective historian will draw the conclusion that only under these conditions would it no longer be possible to hold Dacia, that the Roman army had become needed more along the line of the Danube, and that Aurelian had to choose between retaining imperial dominion over Dacia, but in doing so placing a number of Southern Danubian provinces (Illyria, the two Moesias, Thracia, etc) in grave danger, and abandoning Dacia in order to strengthen the Danubian frontier.

All information confirms this interpretation. The major battles with the Goths were fought not in Dacia but South of the Danube, in Moesia Inferior, at Abrittus, where the emperor Decius perished in battle (251 A.D.), and in Moesia Superior, at Naissus, where the Second Claudius routed the Goths (269 A.D.). The frontier camps in Dacia were not destroyed but quietly and unhurriedly abandoned. By controlling the passes, the Roman army in Dacia did its duty to the full; it defended the province efficiently until duty called it elsewhere.

Nor is there any truth to the statement that the first steps toward abandonment of the province of Trajan were taken by the Emperor Gallienus, who from 253 to 259 ruled together with his father Valerianus, and thereafter to 268 A.D. ruled alone. It is true that a number of ancient authors (Aurelius Victor, Eutropius, Rufius Festus, Iordanes) say of Gallienus that he lost Dacia, but the last three hasten to add that Aurelian was the one who withdrew Roman dominion South of the Danube. This contradiction in the literary sources is only apparent and may by no means be interpreted as meaning that Gallienus began a process, withdrawal, which Aurelian finished.

As a matter of fact, under Gallienus a temple was erected at Potaissa, several inscriptions attest to the fact that the two Dacian legions, the legio XIII Gemina and the legio V Macedonica, were at their stations

(Apulum and Potaissa), the camp at Porolissum was repaired and a number of Palmyrians was made into a cohort, and monetary circulation in Dacia, although weakening as it was throughout the Empire, was not interrupted for a moment. It is true that in 256 A.D. the issue of provincial bronze coins (coins bearing the inscription PROVINCIA DACIA) was discontinued, but this was nothing but a symptom of the grave economic crisis which the Empire was experiencing. Lastly, the coins of the province of Moesia Superior had ceased to be issued 2 years earlier, in 254 A.D., but it occurred to no one to assert that this South Danubian province had been abandoned by Gallienus.

The province of Dacia "ravaged?" As we have seen, the literary sources speak of the ravaging of Illyria, and not of Dacia. Moreover, where are the archeological proofs of its having been laid waste? Where are the ruins of the fortifications from which the troops were withdrawn? Dacia was not a ravaged province in 270 A.D., when Aurelian had struck at Tarraco (in Spain) coins bearing the legend DACIA FELIX, quite similar to those issued by Decius (249-251). On the contrary, the recent discoveries at Ulpia Traiana Sarmizegetusa attest to intensive construction activity even during the reign of Gallienus.

Excavations have been carried out to investigate the space situation between two buildings situated intra muros [within the city walls] and conventionally designated as 001 and 002. At some time in the past a number of inscriptions (votive altars erected by various financial procurators of Dacia Apulensis) and various architectural elements (columns, bases and columns, capitals, blocks, cornices, entablature fragments, etc) came crashing to the ground; they all derived from partial destruction of the buildings in the area (building 001 particularly), and the fact that no trace of fire were detected led to the conclusion that the destruction was due to an earthquake.

Over this debris there was spread in antiquity a thin layer of earth, the ground level in the space in question being thereby raised about 80 centimeters. The foundations of another structure, conventionally designated as 004, were dug up in this new level.

Consequently, it is certain that building 004 was erected after the earthquake. Now the most recent inscription among those fallen in the earthquake and then covered with earth was that of the procurator Marcus Aurelius Marcus, who served in Dacia Apulensis under Emperor Trebonianus Gallus (251-253). In other words, the structures in the zone investigated date from the third quarter of the Third Century A.D., and thus from the time of Gallienus, who, according to J. Fitz, took the "first steps toward cession of this ravaged province."

With the exception of these recent archeological results, J. Fitz could not have been unaware of the arguments in favor of retention of Dacia under the dominion of Rome in the time of Gallienus. These arguments have proved to be powerful enough to convince a scholar of the stature of Andreas Alföldy, who, despite the fact that he subscribed to the theses

of Roesler, did not persist in closing his eyes to an obvious truth. In the authoritative "Cambridge Ancient History," XII, 1971, A. Alföldy pointed out that "the ancient literary authorities state that Dacia was lost in the reign of Gallienus, but this merely reflects the general tendency to hold this emperor responsible for all the evils of his time, a tendency very zealously fostered by the hostile faction in the Senate" (page 151), adding that there are arguments demonstrating that "consideration was not given to abandonment of the province until the beginning of 270" (page 152). As is to be seen, 11 years later J. Fitz took a great step backward in comparison to A. Alföldy.

If Gallienus did not abandon Dacia, how are we to explain the ambiguity of some of the ancient literary sources? On another occasion I have pointed out that the loss of Dacia (*amissio Daciae*) under Gallienus did not mean withdrawal of Roman troops and Roman administration, but only loss of control over this province by the emperor.

The description which J. Fitz gives of the situation in the Dacia of Trajan after the withdrawal by Aurelian is by no means consonant with historical truth. The departure of the troops cannot be equated with "resettling the remainder of the population South of the Danube," but only departure of that portion of the population of Dacia whose interests were bound up with the Empire. Moreover, Aurelian held onto certain bridgeheads on the left bank of the Danube (Dierna, Drobeta, Sucidava), and Constantine the Great reconquered for the empire a sizable strip of land extending at least as far as Romula (Resca) and Praetorium (Mehadia). Roman life did not die out even in the regions which the Romans failed to reoccupy; not one of the cities of the former province was completely abandoned by its population, and there are also very many discoveries in rural areas (Bratei, Biertan, Laslea, Taga, Sic, Iernut, etc) dating from the Fourth Century.

It is all too well known that the oldest traces of the Goths in Transylvania date from the years 330-340; Prof Kurt Horedt assigns them an even later date, after 375 A.D. In the Northern part of the province, at Porolissum, the traces of the Daco-Romans dating from the Fourth Century A.D. become more numerous as research progresses, while pottery making centers of the Dacians rather than of the Vandals or Gepids flourished beyond the borders of the former province, at Mediesu Aurit and Lazuri. Under these circumstances I am surprised by J. Fitz's attempt to represent the former province of Trajan, immediately after its official abandonment, as a country fought over by various Germanic tribes. In reality, the only archeologically documented penetrations of the former province from outside at the end of the Third Century and beginning of the following century were by free Dacians from the Ciuc Lowlands (Mugeni site), Carpians from Moldavia (the Medias gravesite and the Sopteriu necropolis), and Dacians from the Arad Plain (Cipau site).

With the passage discussed so extensively in these "Notes," J. Fitz illustrates how a scholar who has made material and valuable contributions may in certain respects remain captive to an outmoded idea.

This is unfortunate.

## SECURITY PREPARATIONS FOR SARAJEVO OLYMPICS DISCUSSED

Sarajevo OSLOBODJENJE in Serbo-Croatian 20 Oct 83 p 3

[Text] The 14th Winter Olympic Games will be one of the most attractive events of 1984, and this attractiveness includes, in addition to great interest among the entire peace-loving portion of humanity, the "pull" of such an event on various hostile and other terrorist groups and grouplets for the realization of their dark plans. The security aspects of preparations for the 14th Winter Olympic Games were the subject of discussion at yesterday's press conference at the organizing committee of the games, at which Mato Andric, president of the Committee for Social Self-Protection, and Tome Juric, director of the security office of the games organizing committee, spoke with newsmen.

Preparations in this area began practically on the day that the organization of the 14th Winter Olympic Games was won, while the Committee for Social Self-Protection has been working for more than 2 and 1/2 years, states Mato Andric. At any rate, members of the security services from all over Yugoslavia have been involved in the security preparations for the games. Naturally, the majority of those involved are people from Bosnia-Hercegovina and the immediate vicinity of the games. In the preparations, the security experiences of previous Olympics--in Lake Placid, Moscow and Innsbruck--as well as domestic experience in some similar situations, are being utilized.

We are making use of the experience of others, but the security of the 14th Winter Olympic Games will have its unique aspects. We will have well-protected games, but at the same time these will be the games that, in comparison to previous ones, will be guarded by the smallest number of professional and armed personnel, because we are placing maximum reliance on a broad system of social self-protection. In addition to the professional structure, reserve police stations number over 60,000 people, of whom 20,000 are in the games vicinity; in units of social self-protection and all-people's defense we have about 230,000 members, of whom 50,000 are in the games vicinity. In addition, one must reckon on the security awareness of our citizens. These are all forces which are not in the police corps but are an integral part of the self-managing organization of our society, states Mato Andric, that is, we have an office of internal affairs respected not so much for the size of the professional cadre as for its competence and reserve strength, which, for all practical purposes, is composed of our entire citizenry.



For the sake of more successful protection of the Winter Olympic Games appropriate cooperation has been established with some foreign internal affairs departments.

We have received help from the internal affairs organs of some countries. For instance, FRG Interior Minister Zimmermann spent some time here, not without reason, because the extremist emigration operates in the FRG. We have established appropriate cooperation with the Austrians; in the United States they are ready for cooperation aimed at preventing extremist acts.... Both here and abroad there are forces prepared to desecrate the 14th Winter Olympic Games. The fascist emigration originates in the West, but the internal enemy is also interested in damaging the games in order to show that we are not very strong. In addition to all this, it is apparent from the assassination of the Turkish ambassador that even international terrorism no longer bypasses us. But we think that we shall be able to repulse everything and prevent in time every possible action aimed at the Olympic Games. Once again, I emphasize that we will be able to do this with a smaller number of professional and armed personnel than any previous organizers of the winter Olympic competition, Mato Andric concluded.

#### Constant Alertness

Security--that has to consist of our citizens, says Mato Andric. If we are successful in this, we can be sure that in the entire region of Sarajevo and the surrounding area, where the competition will be taking place, there will not be anyone who is unknown, whose role and intentions are unknown. And this must be our defense. If in normal life we tolerate something, now we should not. All our citizens should be aware of this. The significance of a single small oversight must be pointed out to them.

Therefore, if all our citizens are mobilized and if we all carry out our duties promptly, each of us during those 20-25 days will probably be on duty at home two or three times, which will not impose any great hardship. But we will realize various benefits as a result. Above all, we will demonstrate the organization of our society.

Many were doubtful about our ability to organize the Olympics. I hope that we shall disprove them. We have already achieved this with the thus-far successful results in Olympic preparations.

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